U.S. Coast Goord Oceanographic Report

UNITED STATES COAST GUARD

# OCEANOGRAPHIC REPORT No.44

CG 373-14

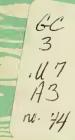
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OCEANOGRAPHIC OBSERVATIONS
IN KANE BASIN AND BAFFIN BAY

MAY AND AUGUST-OCTOBER 1969



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# OCEANOGRAPHIC:



## REPORT No. 44 cg 373-44

OCEANOGRAPHIC OBSERVATIONS
IN KANE BASIN AND BAFFIN BAY
MAY AND AUGUST-OCTOBER 1969

Martin J. Moynihan Robin D. Muench



WASHINGTON, D.C.



OCTOBER 1971



USCGC SOUTHWIND (WAGB 280)



USCGC WESTWIND (WAGB 281)

## **ABSTRACT**

Oceanographic conditions in Kane Basin during the spring and in northern Baffin Bay during the laté summer and early fall of 1969 are described. Preliminary results of current meter measurements taken through the ice in Kane Basin are discussed. Vertical sections of temperature and salinity are presented and the relationship of these variables to Baffin Bay-North Water, Baffin Bay Deep Water and the general circulation of Baffin Bay is discussed. Analyses of isentropic diagrams and dynamic topography are also presented. Listings of physical and chemical station data are included.

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## **PREFACE**

This report is a presentation of the oceanographic data collected by scientists from the University of Washington and the Coast Guard Oceanographic Unit during cruises on the U.S. Coast Guard icebreakers CGC SOUTHWIND and CGC WESTWIND in Baffin Bay and from a station on the ice in Kane Basin. These cruises and this report are part of the U.S. Coast Guard support of the Baffin Bay-North Water project of the Arctic Institute of North America. The area surveyed consisted of Kane Basin and northern and northeastern Baffin Bay. Data discussed in this report include physical and chemical observations in these areas.



## OCEANOGRAPHIC CONDITIONS AT A FIXED LOCATION IN WESTERN KANE BASIN, MAY 1969

by

#### ROBIN D. MUENCH 1

From 3 to 20 May 1969 a three man scientific party carried out an oceanographic sampling program from a fixed position (79°16′N, 72°48′ W) on the fast ice in western Kane Basin (fig. 1). Sampling was conducted by Eddy Carmack and James Overland, both from the University of Washington, and Gordon Tidmarsh from McGill University. The project was carried out under the auspices of the Arctic Institute of North America's Baffin Bay-North Water Project, with logistical support provided by the Canadian Polar Continental Shelf Project. The details of the field work have been discussed by Tidmarsh, et al. (1969).

Scientific features and problems in the Northern Baffin Bay region have been summarized by Mucnch (1971). The purpose of the Kane Basin field program was to:

a. Determine the vertical temperature and salinity structures of the water column at a time of year when late winter (i.e., premelt) conditions were prevalent;

b. Attempt detection of south-flowing Arctic Ocean Water of the proper type to contribute to Baffin Bay Bottom Water; and

c. Obtain a series of current measurements to define the flow through Kane Basin.

The sampling was conducted in approximately the deepest portion of the channel (fig. 1). Depth at the station position was determined by lead line to be 237 m. Three stations per day were taken at fixed hours; a fourth was taken at a random time to reduce the effects of periodic phenomena (e.g., tidal and inertial) on the samples. Water samples were acquired from seven depths except for two stations (32 and 42); samples at these two stations were taken at 10-m intervals to detect fine structure in the water column. Standard Nansen bottles were used in obtaining samples.

Temperatures were read from reversing thermometers supplied by the University of Washington. Strong ambient temperature gradients inside the tent (which served as a laboratory) made it difficult to obtain agreement between the two thermometers on any one bottle. The temperature accuracy is estimated to be  $\pm 0.03$ °C. Salinity samples were decanted into polyethylene bottles and returned to the University of Washington for analysis. The salinities are accurate to  $\pm 0.02$ %.

Two Braincon Model 381 recording current meters were suspended through the ice at 50 to 150 m depths from 5 to 20 May. The deeper meter malfunctioned and yielded no data, while the shallower meter yielded a complete record. Speeds are estimated to be accurate to  $\pm 3\%$  of the measured values, while directions are accurate only to about  $\pm 20^{\circ}$  due to the weak horizontal magnetic field in the survey area.

The hydrographic results (fig. 2) indicated that time-dependent changes in the water column were negligible over the measurement period. A nearly homogeneous layer, characterized by frequent 0.02 to 0.03°C supercooling, extended from the surface down to 50 m. Temperature was assumed to be a more reliable indicator of downward convection than salinity (Aagaard and Coachman, 1968) and suggested downward convection to 100 m, below which strong thermo- and haloclines occurred down to 200 m. No water of the proper type to contribute to Baffin Bay Bottom Water (-0.38 to -0.40°C, 34.48 to 34.50%) was detected.

The measured currents are summarized in the form of speed and direction histograms (fig. 3). The complete set of current measurements was too long for inclusion in this report, but may be obtained from the Department of Oceanography, University of Washington.

The directions were bimodal, with a general southward (about 220° T) flow and less frequent

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northward (about 360° T) flow. Some northwestward (270-to-360° T) flow occurred, but little eastward (90° T) flow was evident. The individual data points indicated that flow reversals coincided with the diagnal tidal currents.

Speeds were generally below 25 cm/sec, and much of the record showed no detectable motion. A small peak on the speed histogram at about 8 cm/sec is of unknown cause. It is concluded that a sluggish net southward flow was occurring, with occasional reversals leading to northward flow.

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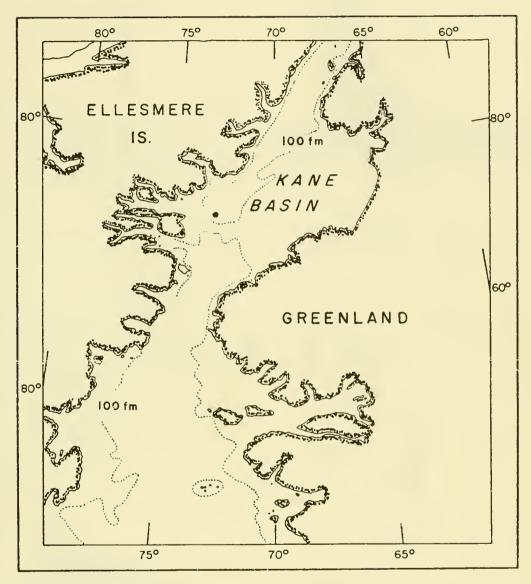
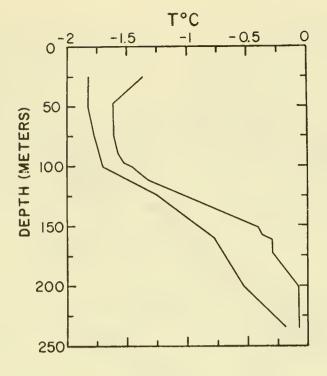


FIGURE 1. Geographical position of the ice camp from which oceanographic stations were occupied and current measurements made in May 1969. The dotted line indicates the 100 fm isobath (from Canadian Hydrographic Office Chart No. 7000).



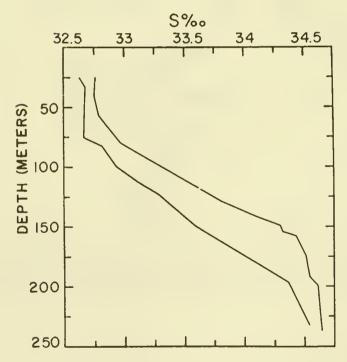
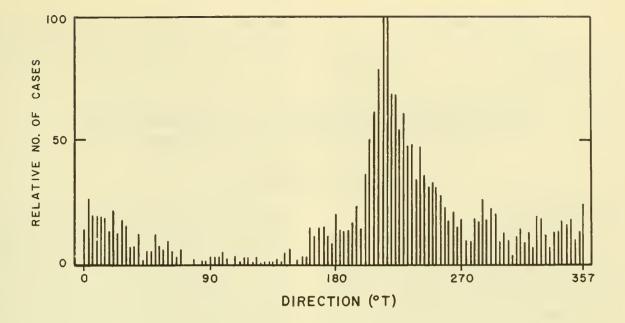


FIGURE 2. Envelopes of the vertical distributions of temperature and salinity observed in western Kane Basin during May 1969.



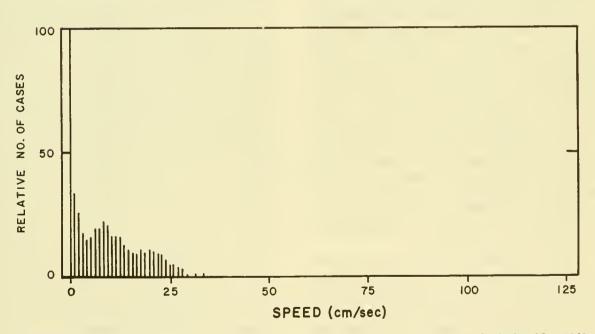


FIGURE 3. Histograms of current speed and direction at 50 m depth in western Kane Basin during May 1969.

## OCEANOGRAPHIC CONDITIONS IN NORTHEASTERN BAFFIN BAY DURING AUGUST 1969

#### MARTIN J. MOYNIHAN 1

#### INTRODUCTION

The USCGC SOUTHWIND occupied thirtysix oceanographic stations in the waters of central and northeastern Baffin Bay from 14 to 28 August 1969 as part of the International Ice Patrol's West Greenland Glacier and Oceanographic Survey (fig. 1). This survey was part of a multiyear project to investigate the tidewater glaciers and oceanographic conditions along the western coast of Greenland to determine the differences between existing conditions and historical data as related to the origin and drift of icebergs (Moynihan, et al., 1970).

Temperature data and water samples were collected by Nansen casts. The resulting water samples were analyzed for salinity and oxygen concentrations on board the USCGC SOUTH-WIND. Salinity was determined on board using an inductive salinometer. The conductivity values obtained were converted to salinity by use of the International Oceanographic Tables published jointly by UNESCO and the National Institute of Oceanography of Great Britain (1966). Dissolved oxygen concentrations were determined by the modified Winkler Method as described by Strickland and Parsons (1968). The resulting data were processed later at the Coast Guard Oceanographic Unit with a PDP-5 computer.

The data presented in the Tables of Oceanographic Data (Appendix A) are reproduced from computer listings from the National Oceanographic Data Center (Cruise Number 31-1529). Anomalies of dynamic height in the listings were computed by NODC; but all discussion of dynamic heights in this text are based on computations made at the Coast Guard Oceanographic Unit.

In addition, grab samples and cores of bottom sediments were obtained with an orange peel grab and Phleger corer at selected stations in the fjords seaward of glacier termini. The collection of these samples was supervised by U. S. Naval Oceanographic Office personnel. A preliminary anlaysis was conducted by Achstetter, et al. (1970), and the remaining material is presently held at the Geological Laboratory of the Naval Oceanographic Office.

### DISCUSSION

The circulation of Baffin Bay plays an important role in the drift of icebergs from their parent glaciers on the western coast of Greenland to the North Atlantic shipping lanes off the Grand Banks. Smith (1931), Hawley, et al. (1941), and Dunbar (1951) described a cyclonic circulation of water in Baffin Bay and a similar drift of icebergs. West Greenland Current Water enters from the southeast through Davis Strait and water of polar origin enters from the northwest through Lancaster, Jones and Smith Sounds. The southward flowing Baffin Land Current along Baffin Island and recirculation of some West Greenland Current Water through the western side of Davis Strait account for the outflow of water from Baffin Bay.

Charts of dynamic topography (figs. 2 and 3) prepared from the USCGC SOUTHWIND's survey were used to depict the current patterns in this area. A weak northward flowing current was found near the Greenland coast and the general southeastward drift found offshore is believed to be the extreme eastern portion of the Baffin Land Current.

Remnants of the West Greenland Current were found in the warm, saline (>1.0°C, >34.4%) layer between 250 and 800 meters on all sections. A core of warm, high salinity water (>2.0°C, >34.5%) between stations 27 and 32 (figs. 6 and 7)

<sup>&</sup>lt;sup>1</sup> U.S. Coast Guard Oceanographic Unit, Bldg. 159-E, Washington Navy Yard, Washington, D.C. 20390.

appears to be part of a pool of West Greenland Current Water over the wide shelf in northeastern Baffin Bay. It was larger than a similar core found to the south at stations 18 and 19 (figs. 4 and 5). The core of West Greenland Current Water also was associated with high concentrations of dissolved oxygen (5.8 to 6.5 ml/l, fig. 7).

Water of polar origin (>0°C, 32.0–34.0%), found in the upper 250 meters of sations 18 through 26 (figs. 4, 5, 9 and 10), made up the southeastward drift detected in the dynamic topography. Baffin Bay Deep Water (<-0.5°C, 34.40–34.45%), was found below 1250 meters on these stations. Bailey (1956) concluded that this water originates in the Arctic Ocean at depths of about 250 meters, flows into the Bffin Bay through Smith Sound and sinks to depths between 1250 and 2100 meters.

The effect of solar heating and melting of sea ice was noticeable during this summer survey as indicated by temperatures of >0.0°C and salinities of <32.0% found in the near surface water (figs. 11 and 13). The influence of runoff is evidenced by the low salinities (<30.0%) and high dissolved oxygen (>9 ml/l, Appendix A) found at the surface along the coast.

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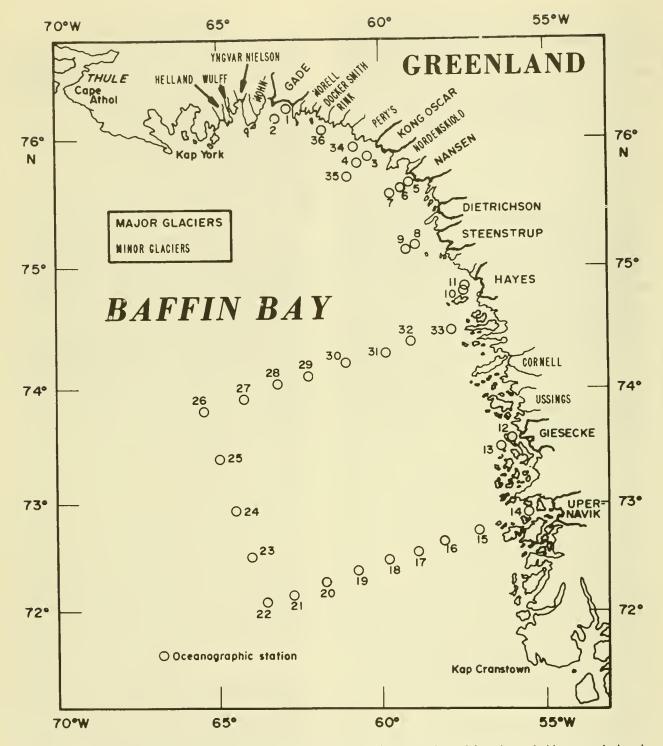


FIGURE 1. Positions of CGC SOUTHWIND stations 1-36, 14-28 August 1969 and locations of tidewater glaciers in Northeastern Baffin Bay.

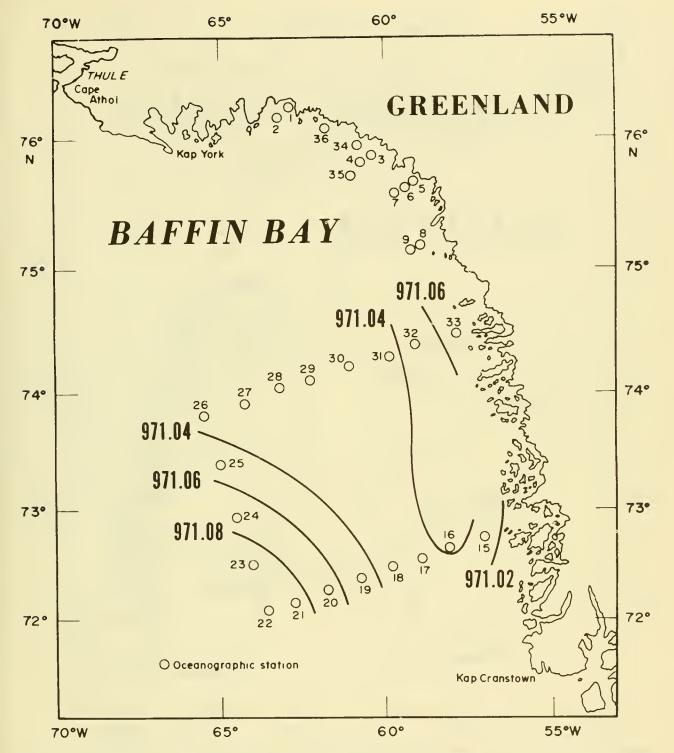


FIGURE 2. Dynamic topography (dynamic meters) of the sea surface with reference to the 1000 decibar surface, CGC SOUTHWIND survey 14-28 August 1969.

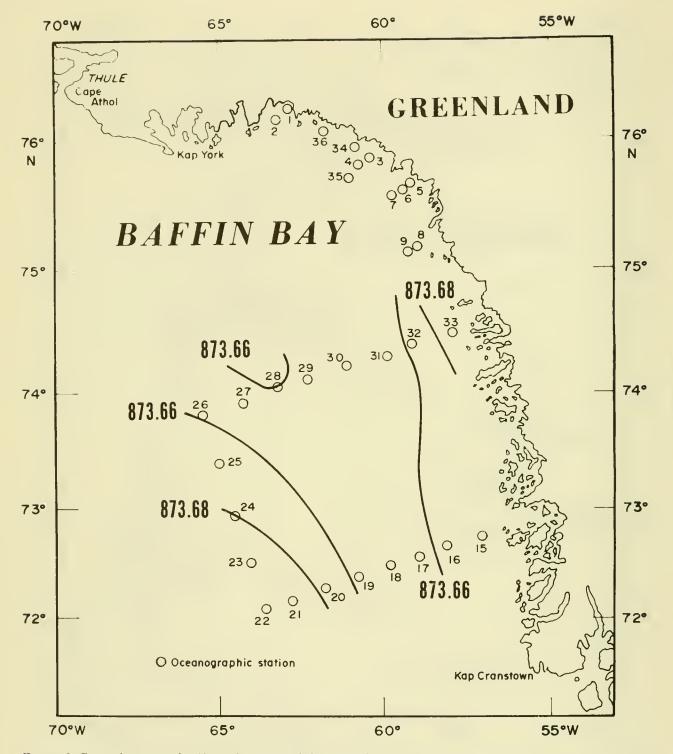


FIGURE 3. Dynamic topography (dynamic meters) of the 100 decibar surface with reference to the 1000 decibar surface, CGC SOUTHWIND survey 14-28 August 1969.

## STATION NUMBERS 2.0 1.5 8 00 0.5 DEPTH (METERS) N. MILES

FIGURE 4. Vertical distribution of temperature (°C), CGC SOUTHWIND stations 15 to 22, 24-25 August 1969.

## STATION NUMBERS 34.5 DEPTH (METERS) MILES

Figure 5. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), CGC SOUTHWIND stations 15 to 22, 24–25 August 1969. Contour interval  $0.5^{\circ}/_{\circ\circ}$  above  $33^{\circ}/_{\circ\circ}$  and  $3^{\circ}/_{\circ\circ}$  below  $33^{\circ}/_{\circ\circ}$ .

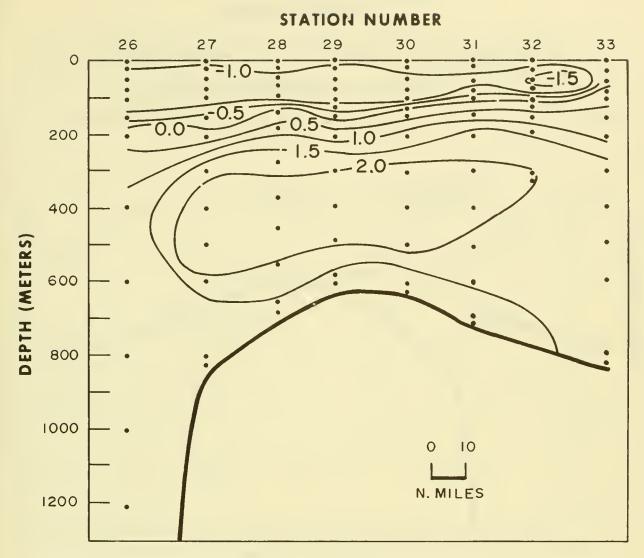


FIGURE 6. Vertical distribution of temperature (°C), CGC SOUTHWIND stations 26 to 33, 26 August 1969.

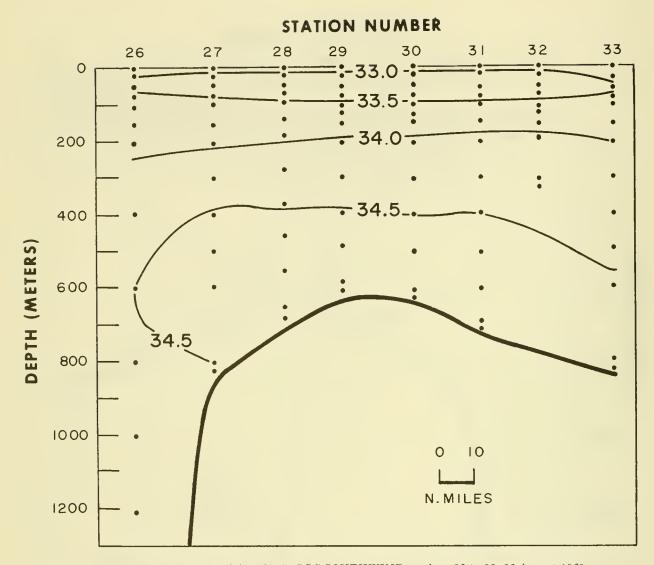


Figure 7. Vertical distribution of salinity  $(^{\circ}/_{\circ\circ})$ , CGC SOUTHWIND stations 26 to 33, 26 August 1969.

## STATION NUMBER

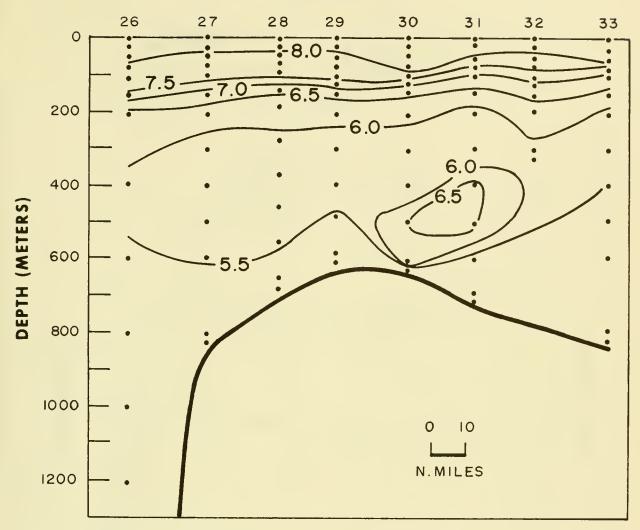


FIGURE 8. Vertical distribution of dissolved oxygen (ml/l), CGC SOUTHWIND stations 26 to 33, 26 August 1969.

## STATION NUMBER -1.5 1.5 1.5 2.0, 2.5 0.5 DEPTH (METERS) 0.0 < 0.0 N. MILES

FIGURE 9. Vertical distribution of temperature (°C), CGC SOUTHWIND stations 22 to 26, 25-26 August 1969.

## STATION NUMBER 33.0 33.5 34.0 34.5 34.5 DEPTH (METERS) 16 00 N. MILES

Figure 10. Vertical distribution of salinity (°/oo), CGC SOUTHWIND stations 22 to 26, 25-26 August 1969.

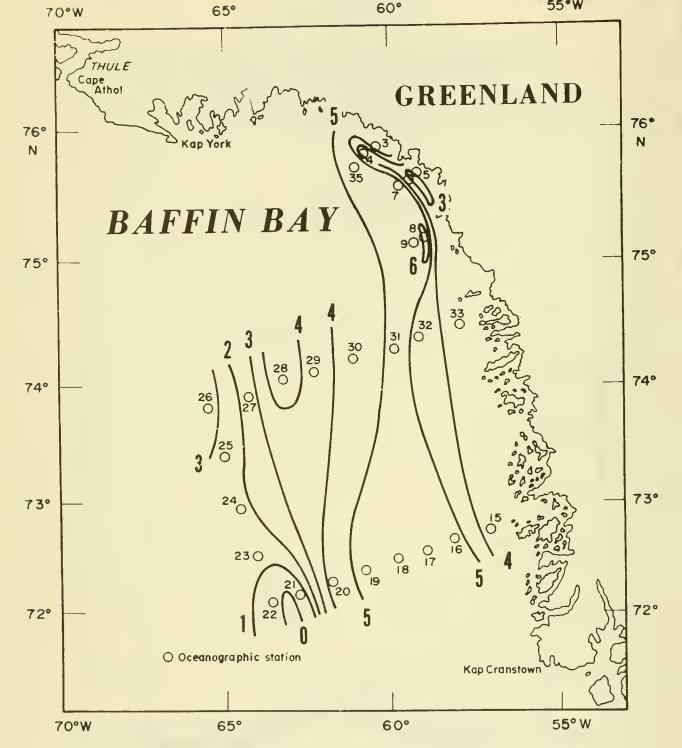


FIGURE 11. Horizontal distribution of temperature (°C) at the sea surface, CGC SOUTHWIND survey 14-28 August 1969.

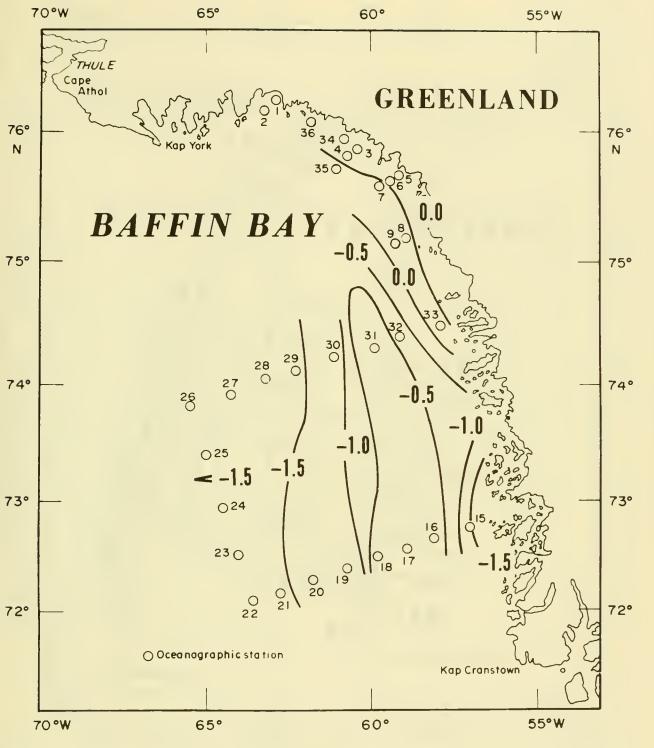


FIGURE 12. Horizontal distribution of temperature (°C) at the 100 meter level, CGC SOUTHWIND survey 14-28 August 1969.

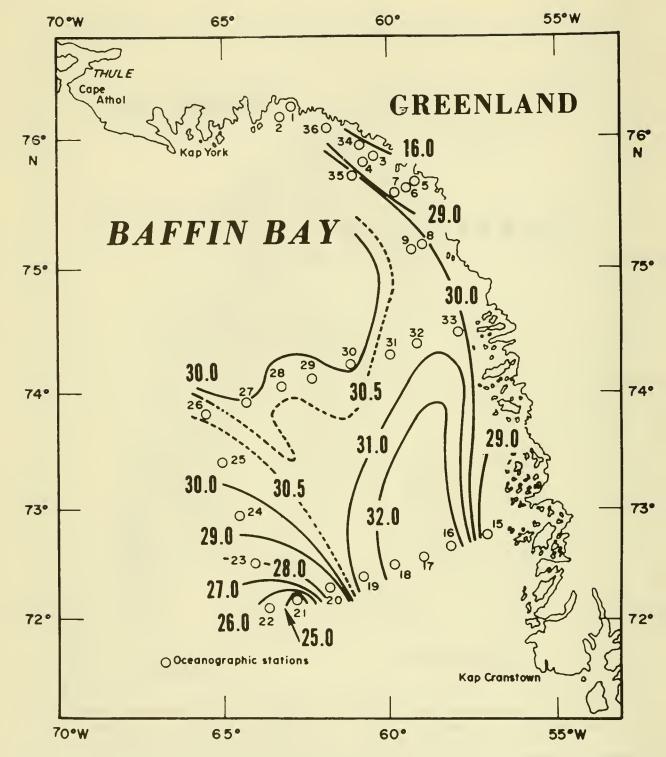


FIGURE 13. Horizontal distribution of salinity (°/00) at the sea surface, CGC SOUTHWIND survey 14-28 August 1969.

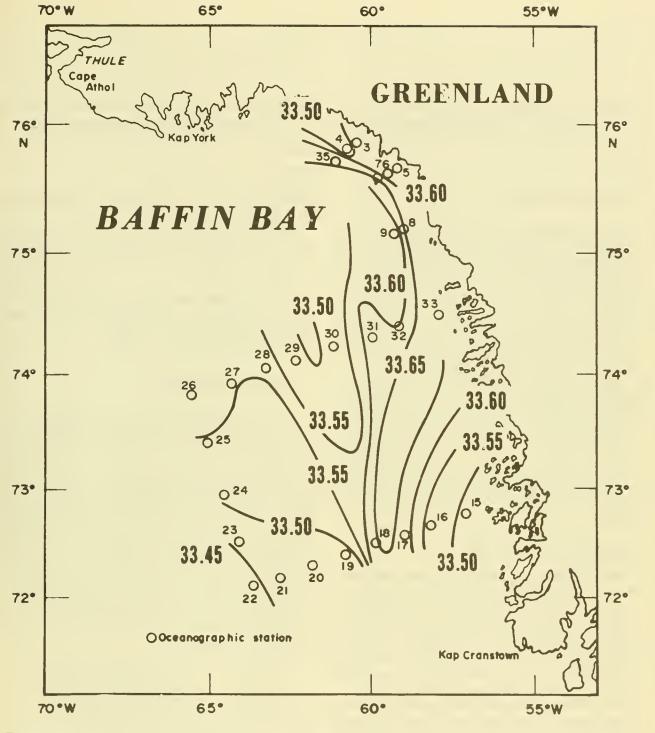


FIGURE 14. Horizontal distribution of salinity ( $^{\circ}/_{\circ\circ}$ ) at the 100 meter surface, CGC SOUTHWIND survey 14-28 August 1969.

## OCEANOGRAPHIC CONDITIONS IN THE MELVILLE BAY-CAREY ISLANDS REGION, NORTHERN BAFFIN BAY, 17 SEPTEMBER-2 OCTOBER 1969

by

## ROBIN D. MUENCH 1

#### INTRODUCTION

An oceanographic survey was carried out from the CGC WESTWIND in the Melville Bay-Carey Islands region of northern Baffin Bay from 17 September-2 October 1969 (figs. 1 and 2). This survey was carried out under the auspices of the Baffin Bay-North Water Project, coordinated by the Arctic Institute of North America and cooperative among groups from the University of Washington, the United States Coast Guard, McGill University and Dartmouth College.

The oceanography of northern Baffin Bay has been discussed by Muench (1971). The 1969 survey was designed to investigate this region by continuing, to the southeast, the detailed survey carried out farther north in 1968 (Muench, et al., 1971). The placement of current meters, designed to be retrieved the following summer, in Smith Sound was an attempt to obtain winter current data.

#### SAMPLING PROGRAM

On 17 September 1969 the scientific field party boarded the CGC WESTWIND at Thule, Greenland. These personnel included Robin D. Muench, Jerry A. Galt, Rick Avis and Joseph Karpen, all from the University of Washington, and Gordon Tidmarsh from McGill University. The CGC WESTWIND was commanded by Capt. J. S. Thuma, United States Coast Guard.

Two Geodyne Model 850 recording current meters were moored in north central Smith Sound (78°30.6′N, 73°51.0′W) on 20 September. This array was designed to be retrieved by means of an acoustic release during summer 1970. Two recording current meters were moored later on the same date at each of the indicated locations south

<sup>1</sup> University of Washington, Present address: Institute of Marine Science, University of Alaska, College, Alaska 99701. of Cape York (fig. 1) and were retrieved on 2 October.

On 21–25 September, stations 1–48 and 00A–00D were occupied, after which foul weather dictated a retreat into Thule. A loss of LORAN coverage necessitated determining the positions of stations 00A–00D by dead reckoning, so that the positions of these stations are considered less reliable than those of other stations. Stations 49–90 were occupied on 27 September–2 October.

## DATA ANALYSIS

The oceanographic data were obtained using a Bissett-Berman Model 9060 self-contained salinity/temperature/depth recording unit (STD). The instrument was used as supplied directly from the factory, where it had been calibrated. It had been intended to place two Nansen bottles on every cast to check temperatures, salinities and depths from the STD, but lack of a shipboard salinometer precluded this. Twenty samples were obtained, using Nansen bottles, for calibration purposes. The temperatures were read using reversing thermometers, and samples were returned to the University of Washington for salinity determination.

The advertised accuracy and resolution, in that order, of the STD were:

Salinity:  $\pm 0.05^{\circ}$ /... and  $\pm 0.02^{\circ}$ /... Temperature:  $\pm 0.05^{\circ}$ C and  $\pm 0.05^{\circ}$ C Depth:  $\pm 0.25^{\circ}$ % full scale and  $\pm 0.10^{\circ}$ % half scale

The STD used (serial number 5418) had a tendency to record salinities 0.05 to 0.10% too high at depths between 500 and 1000 m, the error increasing with depth. Shallower than 500 m, the salinity accuracy was within the advertised specifications. No errors were detected in temperature or depth readings.

The oceanographic station data were compiled by visual digitization of the analog chart output from the STD at standard depths. Salinities below 500 m were corrected with the aid of a calibration curve constructed using salinities from the Nansen bottle samples. The final data are accurate to within the advertised specifications.

Two Braincon Model 381 and two Geodyne Model 850 recording current meters were moored south of Cape York using the mooring configuration and method described previously (Muench, et al., 1971). None of these meters yielded reliable data. Two of them (one of each type) yielded no data at all, while the other two suffered malfunctions which destroyed the time base for the recorded data.

## OCEANOGRAPHIC RESULTS

The oceanographic results are presented as:

- a. Vertical sections showing temperature and salinity distributions (figs. 3-32), constructed directly from the STD vertical profiles;
  - b. Temperature-salinity curves (fig. 33);
  - c. Isentropic diagrams (fig. 34);
  - d. Dynamic topographies (fig. 35); and
- e. Station data listed in standard format (Appendix A).

The region from Melville Bay to the section southwest of Cape Dudley Digges (figs. 3–18; areas 1 and 3, fig. 33) contained a warm (>0°C), saline (>34.4‰) layer at 300–400 m depth and a colder (<0°C), less saline (<33.7‰) layer 50–100 m deep. The warm layer cannot have originated in the Arctic Ocean, due to its low salinity relative to that of Arctic Ocean Water of the same temperature (Muench, 1971), and therefore is Baffin Bay Atlantic Water which originated south of Davis Strait. The cold, shallow layer is a remnant of the preceding winter's convective layer within Baffin Bay, and is part of the Baffin Bay Arctic Water (Muench, 1971).

Water in southwestern Smith Sound (stations 54–55, figs. 31–32; area 2, fig. 33) was characterized by uniformly low temperatures (<0°C) and salinities (<34.3‰). These low temperatures and salinities, coupled with a known net southward transport through Smith Sound (Muench, 1971), suggest that this water originated in the Arctic Ocean.

The water masses in the remaining areas (figs. 19–30; areas 4–5, fig. 33) had temperatures and salinities intermediate between those of the Baffin

Bay Atlantic and Arctic waters and the water of Arctic Ocean origin from Smith Sound and therefore were mixtures of the three masses. Data from other years also suggest that the northern Baffin Bay region is a primary site of mixing between these water masses (Muench, 1971).

A restricted area west of Cape York (stations 44 and 76, figs. 19-22) exhibited a breakdown in vertical temperature structure. This area was also characterized by relatively high surface salinities (>33%). These anomalous features of the temperature and salinity distribution were not observed during other years.

The temperature distribution on the  $\sigma_t$ =27.5 surface (fig. 34) corroborated the contention that water from the relatively warm Baffin Bay Atlantic Water layer was the cause of the temperature maximum (>2°C) in Melville Bay. This warm water extended westward past Cape York and then northward as a tongue east of the Carey Islands. The Baffin Bay Atlantic Water, which had been modified by admixture of Arctic Ocean Water from Smith Sound, was characterized by lower temperatures (<1.5°C). This occurred on 21–25 September as a southeasterly-trending tongue south of the Carey Islands which appeared, by 27 September–2 October, to be detaching to form a "blob" (fig. 34).

The baroclinic circulation may be estimated from the slopes of the isohalines on vertical salinity distributions, because they indicate the internal mass distribution in cold water, but this circulation is more clearly indicated by dynamic topographies (fig. 35). Prominent features observed in the circulation were the westward to northward coastal current from off Cape York to east of the Carey Islands, and the southward flow west of the islands. This general circulation pattern appears to be common here (Muench, 1971). The complex cyclonic circulation shown south of the Carey Islands may not be real, because of the relative inaccuracy of the temperature and salinity measurements on which the dynamic computations were based. The countercurrent between the two westernmost stations west of the Carey Islands was defined only by those two stations; since such a feature has never before been observed there, it should be regarded with skepticism.

A high concentration of icebergs along the coast northwest of Cape York during the observation period suggested the presence there of a northwestward coastal surface current. A southward extending "plume" of icebergs south of Cape York also suggested a southward surface current there coincident with the southern arm of the anticyclonic meander indicated by the 34 dyn cm isoline (fig. 35, upper). The westward tongue-like extension of Baffin Bay Atlantic Water south of Cape York (fig. 34, upper) suggested a westward current at that depth (400 m).

The westward and northward coastal currents off Cape York appeared to be related to the presence of an overlying near-surface wedge of relatively low salinity (generally <32.5%, but occasionally <30%) water (figs. 4, 6, 8, 10, 14, 19, 26, 30, and 32). This wedge has been suggested by Muench (1971) to be due to runoff from the western Greenland near-coastal ablation zone. The southward current west of the Carey Islands was part of the well documented net southward flow through Smith Sound, farther to the north.

The 1969 data clarified the temperature and salinity distributions and circulation in northern Baffin Bay from the Carey Islands to Melville Bay. The features observed were similar to those observed in previous years. Failure of the moored current meters precluded comparisons between baroclonic and total currents.

## REFERENCES

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Muench, R. D., M. J. Moynihan, E. J. Tennyson, Jr.,
W. G. Tidmarsh, and R. B. Theroux (1971) Oceanographic conditions in Smith Sound and northern Baffin Bay, September 1968 in Oceanographic Observations in Baffin Bay during July-September 1968. U. S. Coast Guard Oceanographic Report, CG-373-37.

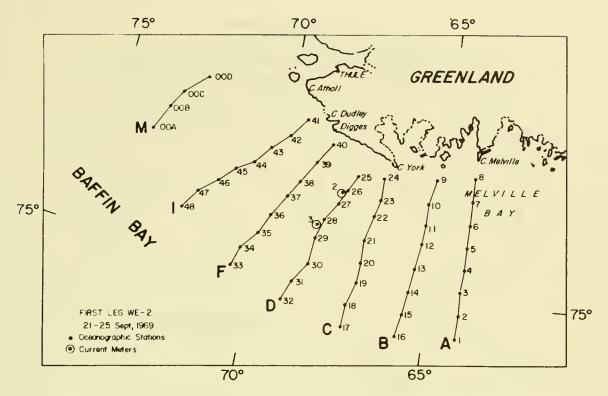


FIGURE 1. Cruise track of CGC WESTWIND. First leg, showing stations and sections.

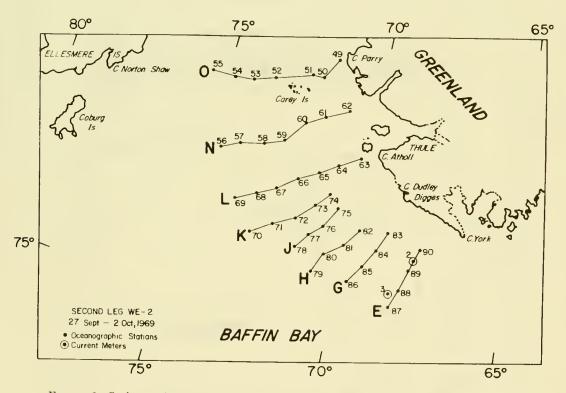


FIGURE 2. Cruise track of CGC WESTWIND. Second leg, showing stations and sections.

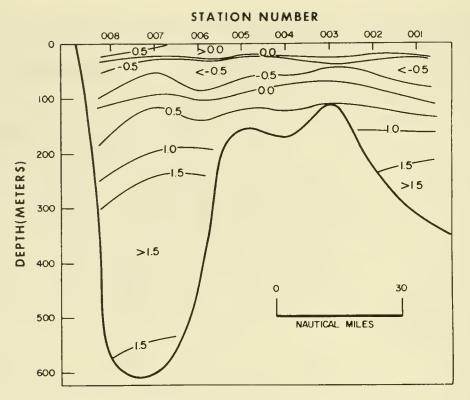


FIGURE 3. Vertical distribution of temperature (°C), Section A.

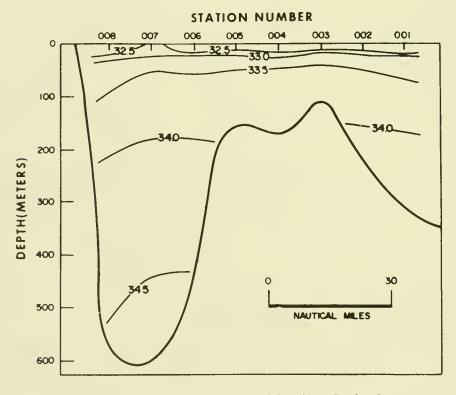


Figure 4. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section A.

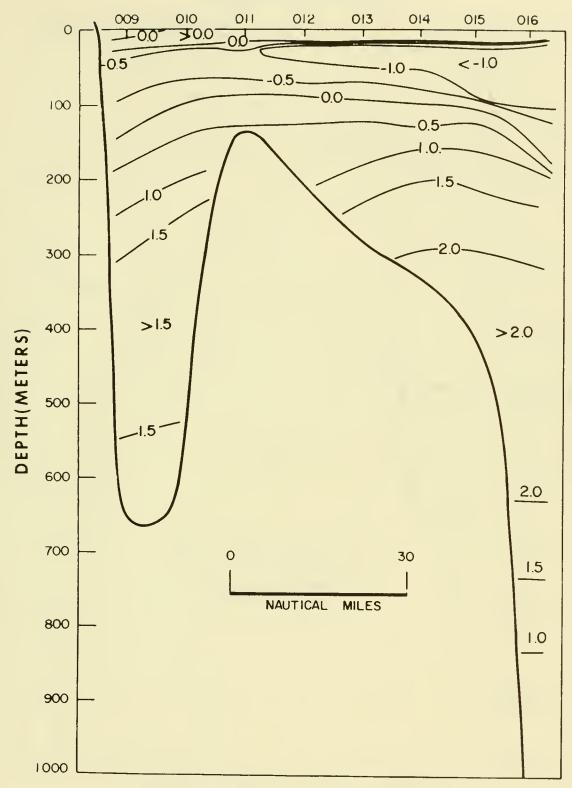


FIGURE 5. Vertical distribution of temperature (°C), Section B.

# STATION NUMBER 33.0 32.5 .32.5 -33.5 34.0 34.Ó 00 DEPTH(METERS) 34.5 NAUTICAL MILES

Figure 6. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section B.

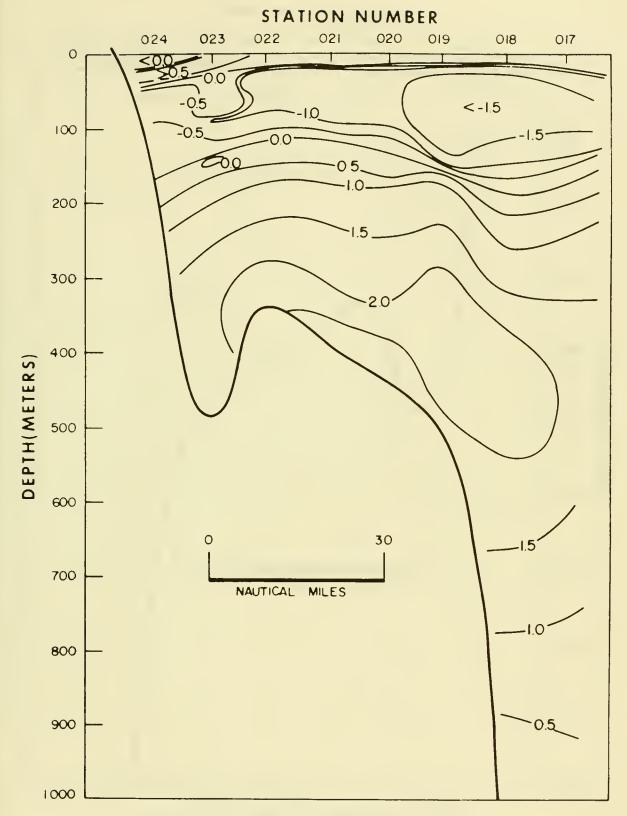


FIGURE 7. Vertical distribution of temperature (°C), Section C.

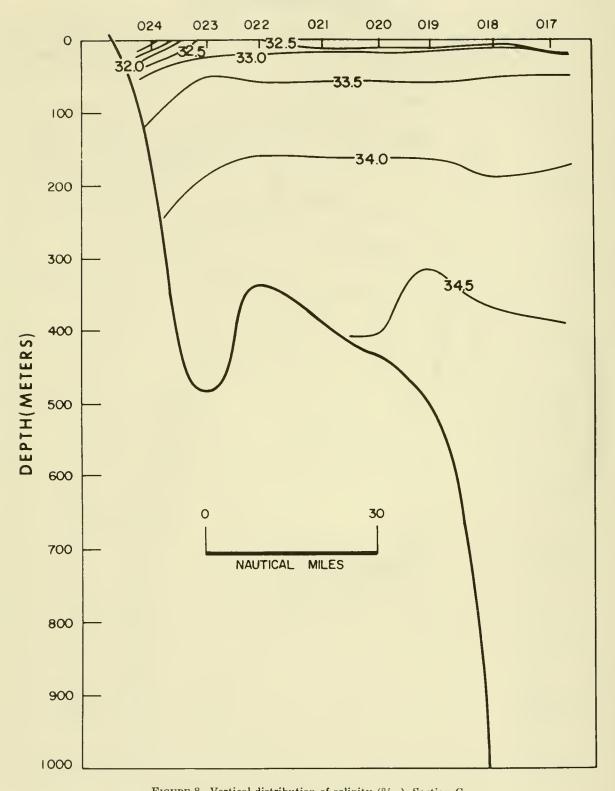


Figure 8. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section C.

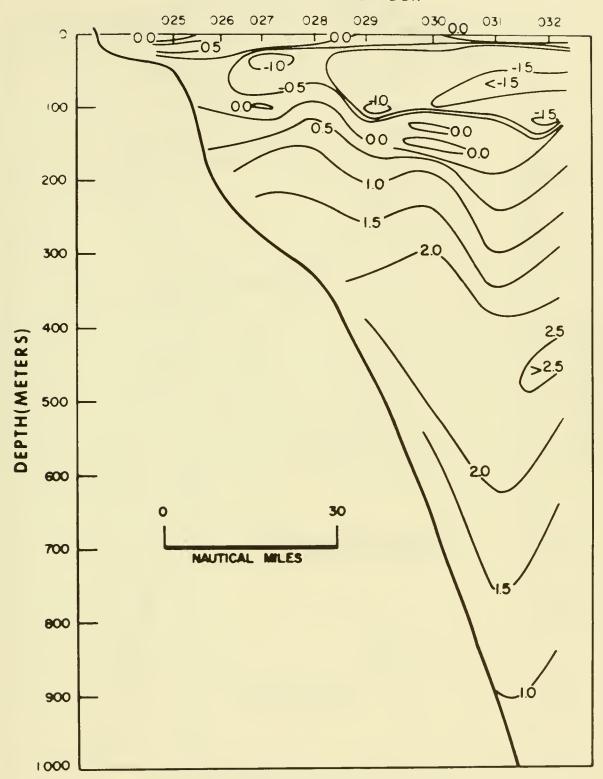


FIGURE 9. Vertical distribution of temperature (°C), Section D.

# STATION NUMBER 030 32.5 031 026 027 <del>--</del>33.0 -33 5· 34.0 DEPTH(METERS) NAUTICAL MILES

Figure 10. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section D.

### STATION NUMBER -05 00. 0.5 DEPTH(METERS) >20 NAUTICAL MILES

Figure 11. Vertical distribution of temperature (°C), Section E.

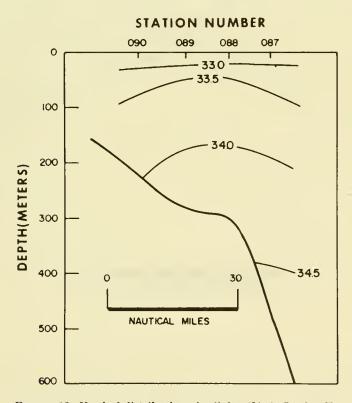


Figure 12. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section E.

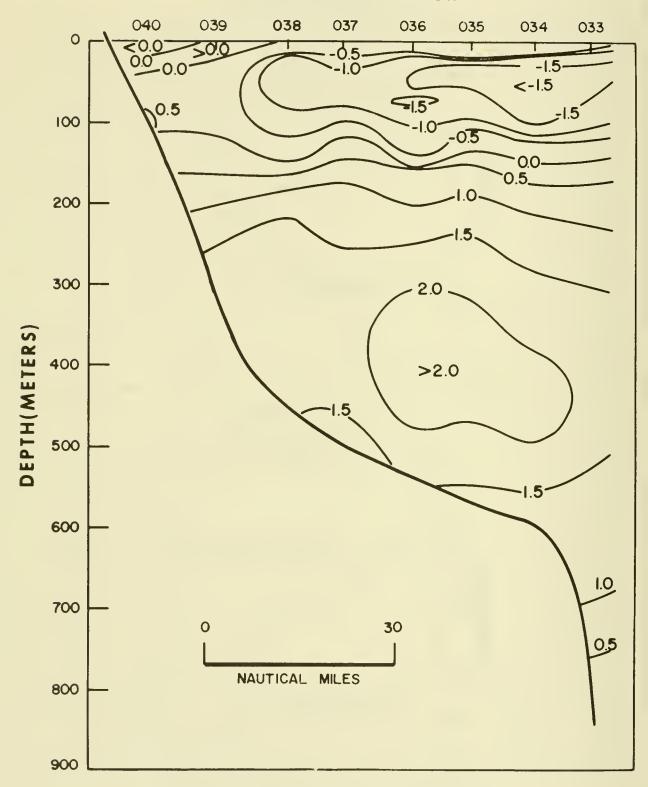


FIGURE 13. Vertical distribution of temperature (°C), Section F.

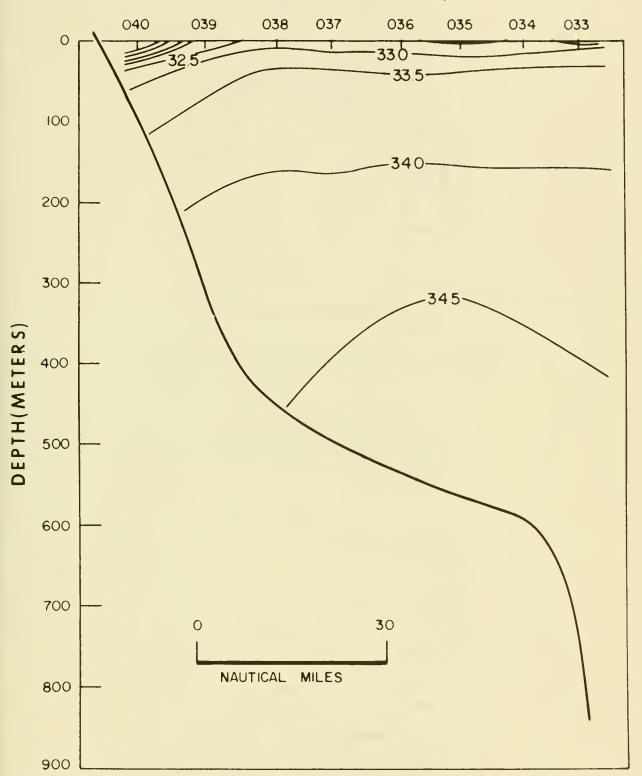


Figure 14. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section F.

# STATION NUMBER DEPTH(METERS) 1.5 2.0 >2.0 NAUTICAL MILES

FIGURE 15. Vertical distribution of temperature (°C), Section G.

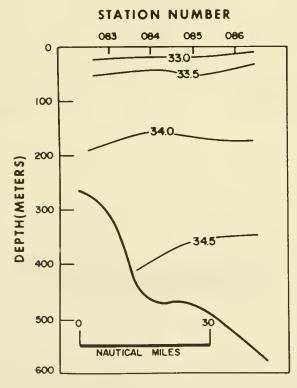


Figure 16. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section G.

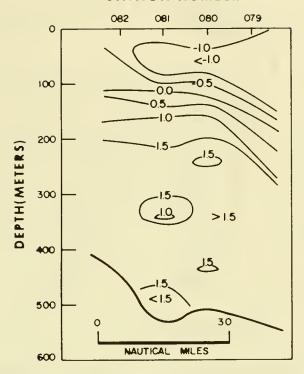


FIGURE 17. Vertical distribution of temperature (°C), Section H.

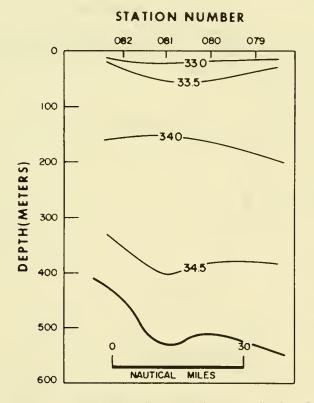


Figure 18. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section H.

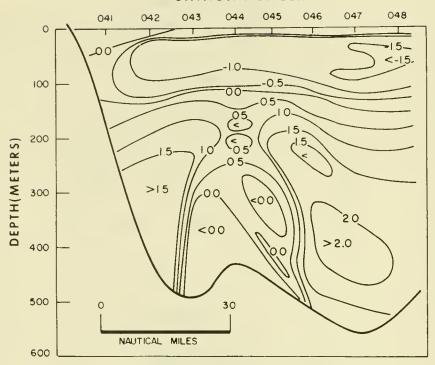


FIGURE 19. Vertical distribution of temperature (°C), Section I.

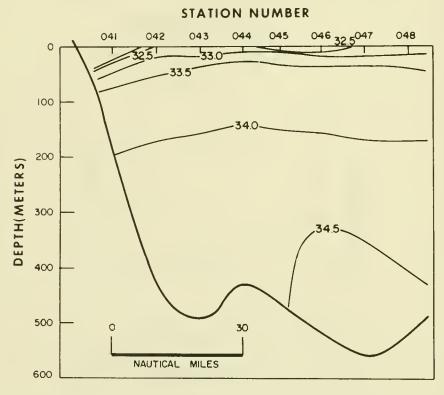


Figure 20. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section I.

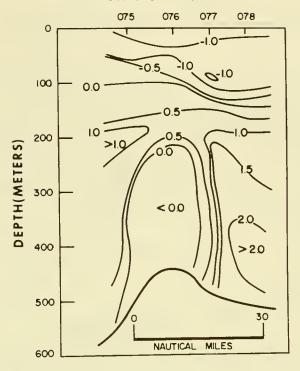


FIGURE 21. Vertical distribution of temperature (°C), Section J.

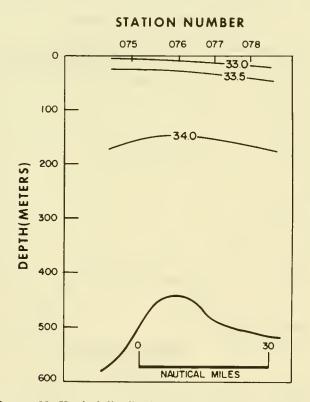


Figure 22. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section J.

#### STATION NUMBER 072 071 070 074 073 0 1.0 <-I.O 0.5. 100 0.0 0.0 200 DEPTH(METERS) 0.0ع 300 <0.0 400 0.0->0.0 30 500

FIGURE 23. Vertical distribution of temperature (°C), Section K.

600

NAUTICAL

MILES

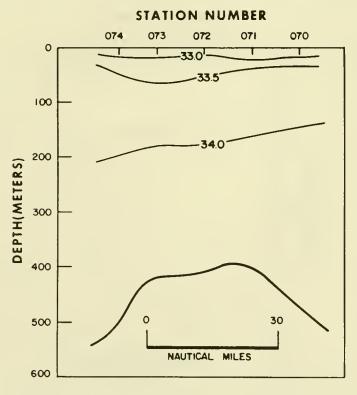


Figure 24. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section K.

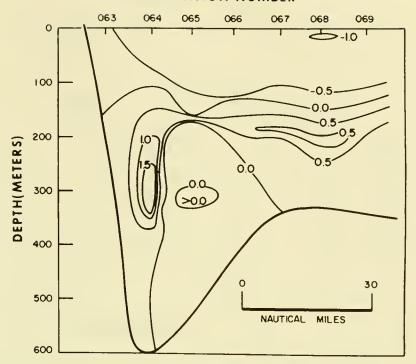


FIGURE 25. Vertical distribution of temperature (°C), Section L.

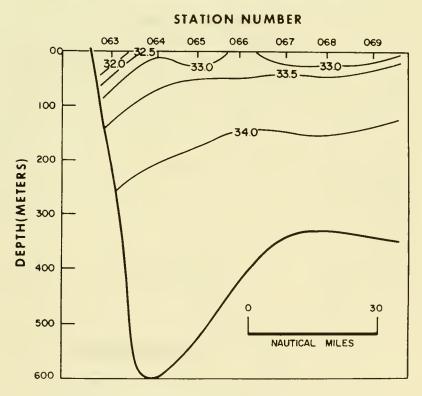


Figure 26. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section L.

# STATION NUMBER OOD 000 008 OOA 0 <-10 -1.0 100 -05< -0.5 DEPTH(METERS) 200 (500) 300 400 30 NAUTICAL MILES 500

FIGURE 27. Vertical distribution of temperature (°C), Section M.

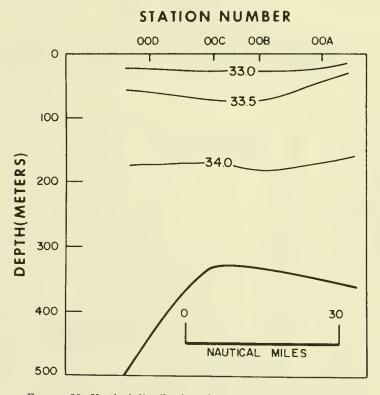


Figure 28. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section M.

#### STATION NUMBER 056 062 061 060 059 058 057 0 <-1.0 >-1.0 \_\_-OQ 100 -05 05 00-60 00. 200 **DEPTH(METERS)** <00 300 00 <00 400 30 0 500 NAUTICAL MILES

FIGURE 29. Vertical distribution of temperature (°C), Section N.

600

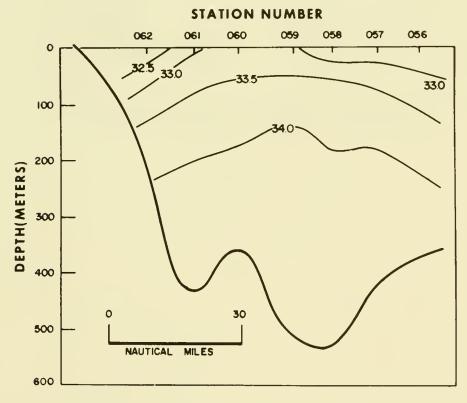


Figure 30. Vertical distribution of salinity ( $^{\circ}/_{\circ \circ}$ ), Section N.

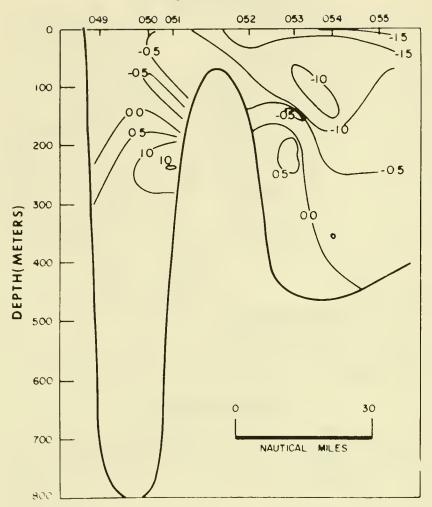


FIGURE 31. Vertical distribution of temperature (°C), Section O.

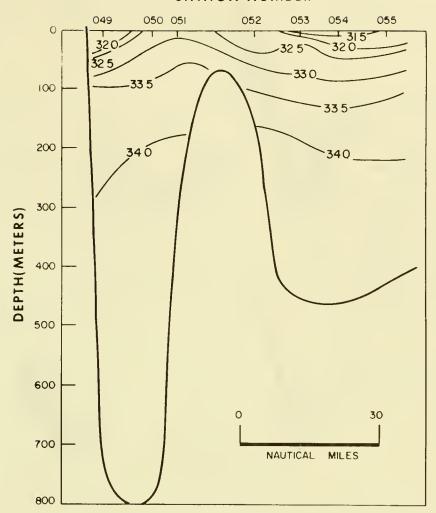


Figure 32. Vertical distribution of salinity (°/ $_{\circ\circ}$ ), Section O.

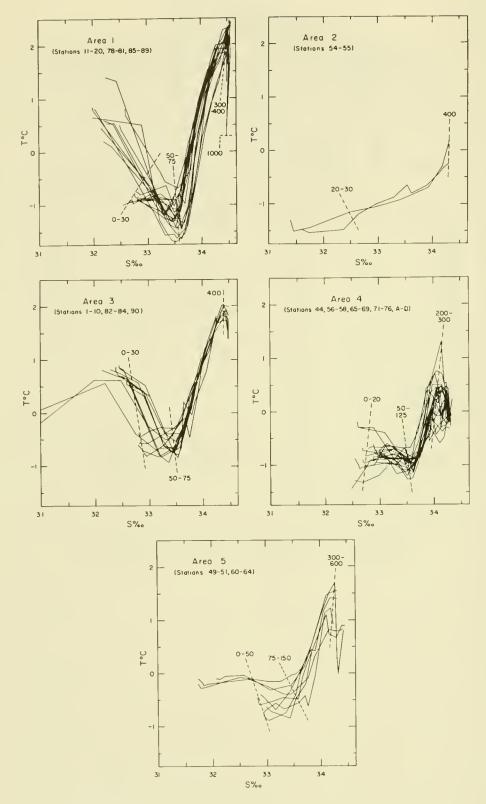


FIGURE 33. Temperature-salinity curves for the areas indicated on Figure 34.

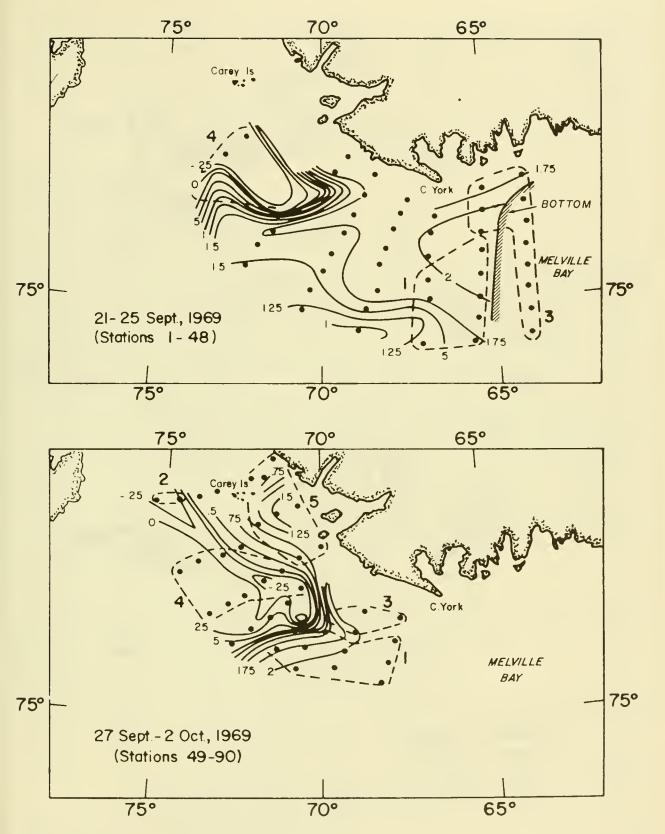


FIGURE 34. Temperature on the 27.5 sigma-t surface, with contour interval of 0.25°C. Numbered areas delineated by dashed lines are represented by correspondingly numbered temperature-salinity curves in Figure 33. Shaded area represents intersection of sigma-t surface with the bottom.

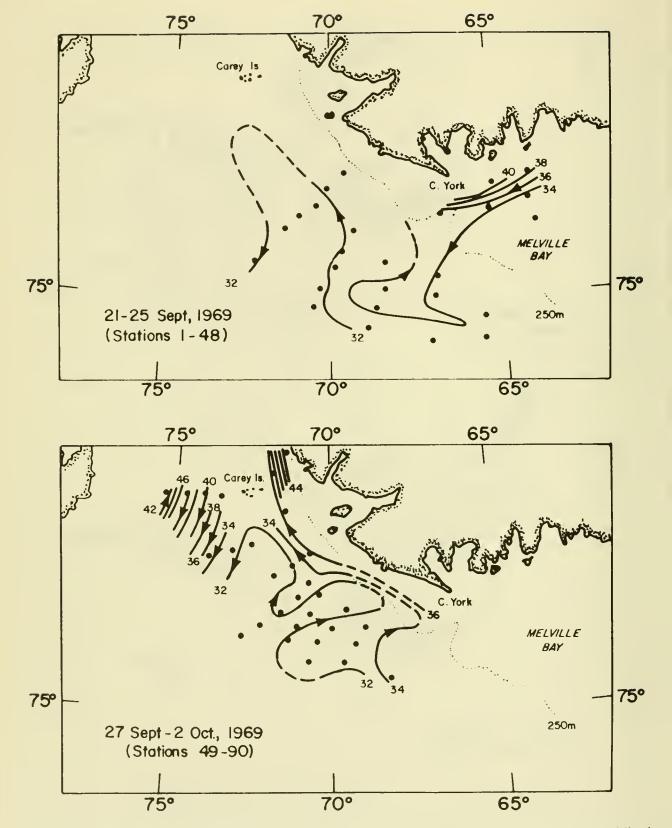


FIGURE 35. Dynamic topographies of the surface relative to 400 db, with contour interval of 2 dyn cm. Dotted line is the 250 m isobath.

# APPENDIX A OCEANOGRAPHIC DATA

#### Cruises Listed

Table I—University of Washington, May 1969

Table II—USCGC SOUTHWIND, August 1969

Table III—USCGC WESTWIND, September-October 1969

Depth to bottom\_\_\_\_\_ Corrected or uncorrected sounding in meters.

Max. depth of samples\_\_\_\_\_ Depth of deepest sample to nearest multiple of one hundred meters.

#### **Codes Utilized**

A complete description of the codes utilized in the tabulation of oceanographic station data can be found in National Oceanographic Data Center publication M-2, Processing Physical and Chemical Data from Oceanographic Stations. (Rev. August 1964, supplement issued May 1966.)

To facilitate use of the oceanographic station data listing, entry headings which are not self-explanatory are described below.

max. depth of samples	Depth of deepest sample to hearest multiple of one hundred meters.
Wave observations:	
DIR	Rounded to nearest multiple of ten degrees.
HGT	In increments of ½ m. Sum of 5 meters plus increments of ½ m if 50 is added to direction.
PER	If numerals 2 through 9 are entered, period in seconds is twice the numeric entry or 2× (numeric entry) +1. For other entries see WMO Code 3155.
SEA	Sea state according to WMO Code 3700.
Weather code	If preceded by X, weather according to WMO Code 4501. If a two-digit entry, weather according to WMO Code 4677.
Cloud code:	
Type	Cloud type according to WMO Code 0500.
Amount	Cloud amount in eights. Entry of the numeral 9 indicates cloud amount could not be estimated.
Water:	
Color code	Color according to Forel-Ule scale.
Trans	Transparency in whole meters as determined by Secchi disc.
Wind:	
Dir	Rounded to nearest multiple of ten degrees.
Speed or force	If preceded by letter S, wind speed in knots; if preceded by letter F, wind force according to Beaufort scale.
Barometer	Barometric pressure given in tens, units and tenths of millibars.
Air temp., °C	Air temperature to tenths of a degree centigrade.
Vis. code	Visibility according to WMO Code 4300.
No. obs, depths	Number of observed levels associated with the station.
Messenger time	Entered in hours and tenths of an hour GMT. For Nansen casts, indicates time of release of messenger applicable to the observational level. For STD casts, incicates the starting time of lowering the sensor.
Card type	OBS designates observed levels. STD indicates the values at this standard level were interpolated by a modified 3-point LaGrange formula.
Depth (m)	Depth to nearest meter. A postscript T indicates depth was obtained thermometrically; Z indicates uncorrected "wire out" depth. Postscript Q indicates value was marked doubtful by originator; P indicates value was considered doubtful by NODC. Postscripts P and Q retain this meaning throughout the following entries.
T °C	Temperature to hundredths of a degree Centigrade.
S °/00	Salinity in parts-per-thousand.
SIGMA-T	Entered to hundredths.

Multiply entry by  $10^{-7}$  to obtain specific-volume anomly in cubic centimers per gram.

Anomaly—X 10 <sup>7</sup>	
ΣΔD Dyn. M. X 10 <sup>3</sup>	Multiply entry by $10^{-3}$ to obtain anomaly of dynamic height in dynamic meters referenced to the sea surface.
Sound velocity	Sound velocity according to Wilson's formula entered to tenths of a meter persecond.
O <sub>2</sub> ml/l	Dissolved oxygen in milliliters per liter entered to hundredths.
PO <sub>4</sub> —P μg-at/l	Inorganic phosphate in microgram-atoms per liter entered to hundredths.
Total-P μg-at/l	Total phosphorus in microgram-atoms per liter entered to hundredths.
NO <sub>2</sub> -N μg-at/l	Nitrite-nitrogen in microgram-atoms pre liter entered to hundredths.
NO <sub>3</sub> -N μg-at/l	Nitrate-nitrogen in microgram-atoms per liter entered to tenths.
SiO <sub>4</sub> -Si μg-at/l	Silicate-silicon in microgram-atoms per liter entered to whole units.
pH	Entered to hundredths.

Table I. Observed and interpolated oceanographic data from stations taken from an ice camp in Kane Basin, 7–20 May 1969, prepared from NODC Listing No. 31–1506.

REFERENCE CSRY ID.	SHIP	LATITU	DE	LONGITUDE	14, SO	RSDEN	STATION TIM	NE	YEAR	CRUISE		ATOR'S	=	DEPTN TO	DEPTI DE		WAVE ERVATIONS	WEA-	CLDUD			NODC	
COOR NO.	CODE	•	1/10	1/10	□ ž 10°		MO DAY HR.			NO.	N	UMBER		BDTTON	S'MPL	S OR.	HGT PER SE	CODE	TYPE A MI			NUMBER	
311506	of I	7916	ONIC	)72480W	26	92 WA		ND	1969 BAR	A	OO :	ΛP, °C	- VIS	0237 NO.	SP	CIAL		1	0	1	- 1	0001	
						COLOR		SPEED OR FORCE	1416		JLB	RULR	CODI	OBS. DEPTHS	00000	ZATIONS							
							00 5	500	23	0			B	07									-
	MESSENGR TIME	CAST ND.	C ARD TYPE	DEPTH 6	n}	T *C	s *4.	SIG	MA-T	SPECIFIC	VOLU:		∆ D YN. M x 10 <sup>3</sup>	- SD	UND OCITY	0 2 ml/l	PO4-P yg - et/l	101AL-F µg + 01/1	NO2-N ug - al/l	ND3-N yg - al/l	51 D4-5		500
	HR 1/10																					_	+
	208		OBS STE	0025		0176 0178	32751 3275	26 26		0016	5579	5			384 383								
	200		STO		-(	0180	3275 32754	26 26	38	0016					386 386								
	208		OBS	0075	-(	174	3290	26	49	0015	544	7		14	395								
	208		OBS STD	0075 0100		0174 0160	32895 3304	26		0014	+324	4			395 408								
	208		OBS STD	0100		0160	33043 3331	261		0012	2438	8			408 443								
	200		STD	0150	-0	0062	3362	27	04	0010					470 470								
	208		OBS STO		-(	0062 0037	33622 3442	27	68	0004	232	2		14	501								
	208		OBS OBS	0200 0230		0037 0015	34418 34563	27							501 518								
REFERENCE	SHIP				- E 147	RSDEN	STATION TIM	NE I		0	RIGIN	ATOR'S		DEPTH	MAX		WAVE	WEA-		Т		NODC	
CODE NO.	CODE	LATITU	1/10	LONGITUDE * '1/10	10. 20	UARE 1°	MO DAY HR.	1/10	YEAR	CRUISE NO.		TATION		BOTTON	O.F.		ERVATIONS	THER	TYPL AM			STATION	
311506	,	7916	on lo	72480W	26	92		42	1969		003	2 M.P. °C	$\perp$	0237				28	В			0002	
						COLOR	TRANS. DIR.	SPEED	4 1	ER D	RY JLB	WET BULB	COD!	DBS. DEPTHS	00550	CIAL							
						0001	++	FORCE 500	22	-	_	7020	2	07									
	MESSENGR TIME	CAST NO.	CARD	DEPTH 6	n I	T *C	5 %.	SIG	MA-T	SPECIFIC	VOLUE	7 D	ΔD YN. M		UND	0 2 ml/l	PD 4-P	TOTAL-P	ND2-N	NO3-N	\$104~5		S
	HR 1/10	1			+					, and		+	x 10 <sup>3</sup>	V 6L	OCIII		и <b>р - e1/1</b>	1/1p + gu	µg = al/i	yg - 01/i	yg - ol/	1	c
	042	' '	OBS	0025		0175	32751	26		ı		'			384				'		l	'	1 (
			STO			0176 0177	3275 3273	26		0016					384 387								
	042		OBS STO	0050		0177	32730 3289	26		0015	5523	3			387 396								
	042		QB\$	0075	-(	171	32886	26	48					14	396								
	042		OBS	0100 0100		0156 0156	3286 32863	26		0015	715	5			407 407								
			STO			0106	3364 3417	27		0009					446 474								
	042	!	OBS STD	0150		0069	34171 3447	27		0003	BROG	9			474 504								
	042		OBS	0200	-(	0032	34465	27	71	000.	, , ,	,		14	504								
	042		OBS	0230	-(	0016	34523	27	15					14	517								
REFERENCE	1 1				# ··	RSOEN	STATION TIM			1 0	ISICIN.	ATDR*S			I MAX			1	Lavava				
CTRY ID.	CODE	LATITU	DE	LONGITUDE 1/10		UARE	MO I DAY HR.		YEAR	CRUISE ND.	5	TATION		DEPTH TO BOTTON	DEPTI	DBS	WAVE ERVATIONS HGT PER SE	THER CODE	CODES			NDDC STATION NUMBER	
311506		7916					05 08 12		1969	+				0237	_	3 OIR	HGT PER SE	^	9			0003	
						COLOR	TRANS	SPEED	8ARI METI	∪- ⊢	IR TEA	AP. ℃ WET	VIS.	NO. DBS.	SP	CIAL							
						CODE	tm1 DTR2	FORCE	(mbi	18 (1	JL8	BULB	+-	DBS. DEPTHS	ODJEK								
	MESSENGR	CAST	CARD	DEPTH (	,	1 %	1	500		SPECIFIC	VOLU	ME Z	5 △ Þ	07	UND		PO <sub>4</sub> -P	TOTAL-P	NO <sub>2</sub> -N	ND3-N	SI 04-S	i	3
	MESSENGR TIME HR 1/10	NO.	TYPE	DEFIN	"		s ·/	SIG	MA-T	ANOMA	rra-xic	o, D	∆ D YN, M X 10 <sup>3</sup>	· VEL	DCITY	02 mi/l	μg = α1/l	Na - a1/1	ا/اه - ور	μg - at/l	μg - ο1/		CC
	129		OBS	0025	- 1	0160	32731	26	35	l		- 1		14	391								11
			STE	0030	-(	0161	3273 3273	26	35	0016				14	391 394								
	129	)	OBS	0050	-0	162	32726	26	35	0016				14	394								
	129	)	STC OBS	0075 0075		0160 0160	3283 32834	26		0015	948	8			401 401								
	129		STC OBS		-(	0155	3303 33033	26	60	0014	414	4		14	410 410								
			STD	0125	- (	0094	3376	27	17	0009				14	453								
	129		STC OBS	0150	-0	0052 0052	3424 34239	27	54	0005				14	483 483								
	STD 0200 -0029 129 OBS 0200 -0029						3446 34464	27		0003	392	1			505 505								
	129 OBS 0200 -0 129 OBS 0230 -0						34538	27							523								

REFERENCE	SHIP	LATITUDE	100	NGITUDE NGITUDE	*A / 25		STATION TI		YEAR	ORIGI	NATOR*		OEPT	UEFIR		WAVE ERVATIONS	WEA- THER	CLOUD		N 57	ODC	
CODE NO.	CODE	- 1/	10	· '1/18 ==	10"		H YAD OM		010	NO.	NUMB	ER	BDTTC	2.WF	S DOL	HGT PER SI	CODE	TYPE AM			MBER 004	
311506	1 {	791601	1 1 0 7	2480W	260	WAI	ER W	O1 1 SMED	BARO		EMP. "C	VK	023 NO 085	. SPE	CIAL			1 13	1	1	10041	
						COLOR	TRANS. DIR.	FORCE	(mbs	RULE	BUL	B CODI	DEPT	HZ DRZEKA	2 NOIT A							
	MESSENGI	I CASI	CARD		<u>_</u>	-	28	502	220	SHICIFIC VOI	UME	₹ ∆ D	07	SOUND	O <sub>2</sub> m1/1	PO4-P	TOTAL-P	NO <sub>2</sub> -N	NO3-N	51.04-Si	-11	5
	HR 1/10	at NO.	TYPE	OEPTH (m)	<u> </u>	°C	s */	SIGM	A-1	ANOMALY-	X19 <sup>7</sup>	x 10 <sup>3</sup>		ELOCITY	02 1101	μg - 01/l	Jg − 01/I	pg - al/1	μg - αl/l	μg - α1/l	pН	č
	20 <u>1</u>	1 1	BS	0025	-01		32743	263						4382		l			'	1		11
			STO STD	0030 0050	-01		3275 3279	263 264		00165				4382 4386								
	201		BS STD	0050 0075	-01	75	3283	264		00159	21			4393								
	20		STO	0075 0100	-01		32833 3302	264 265		00144	86			4393 4403								
	201		BS STD	0100 0125	-01 -01		33019 3372	265 271		00092	53		1	4403 4442								
	201		STD BS	0150 0150	-00		3421 34205	275 275		00056	98			4473 4473								
	20:	ι (	STD	0200 0200	-00		3450 34499	277 277		00036	75			4508 4508								
	20		DBS	0230	-00	18	34560	277	8				1	4517								
_																		,				
REFERENCE CTRY ID.	SHIP	LATTUDE	1	NGITUDE NGIN	SQUA	ARE	STATION TI		YEAR	CRUISE	NATOR'	N	DEPT TO BOTTO	OF	OBS	WAVE ERVATIONS	WEA- THER CODE	CODES		į ST	OOC ATION IMBER	
311506		791601	107	2480W	260		MO DAY H		969	NO. KB2 00	NUMB 05		023	3 MIL.	5 Dik.	HGT PER SI	A	TYPE AM		_	005	
						COLOR	TRANS. DIR	SH ED DR	BABO METE	B DRY	EMP. C	T COD	ORS OEPT	COSERV	CIAL							
					ŀ	CODE	(m) 30	FORCE SO1	224	_	BUL	8	07									
	MESSENGI TIME	CAST W NO.	CARD TYPE	DEPTH (m)	т	°C	5 %.	SIGM		SPECIFIC VDI	LUME X19 <sup>2</sup>	₹ ∆ D	. ;	SOUND	O2 ml/l	PO4~P	TOTAL-P.	NO2-N µg - at/i		51 O4-Si µg - a1/1	рН	200
	TIME HR 1/10							-			$\dashv$	x 10 <sup>3</sup>	Ť			74 537			pg - 003	-		+
	025	s' 'C	)BS STD	0025 0030	-01		32730 3273	263 263		00167	61			4381 4382								
	025	. (	STD	0050 0050	-01	81	3272 32716	263 263	5	00168	29			4385 4385								
	025		STO BS	0075 0075	-01	173	3287 32872	264	7	00156	26		1	4395 4395								
	025		STO BS	0100	-01	169	3298 32982	265	6	00147	70		1	4403 4403								
	02.	,	STD	0125 0150	-00	99	3377 3424	271	. 8	000893			1	4451 4483								
	02	5 (	DBS STO	0150 0200	-00	)52	34236 3421	275	4	00058			1	4483								
	029		DBS	0200	-00	27	34206	275	0	00000	, ,		1	4503								
	02	, (	OBS	0230	-00	,11	34571	211	9				1	4520								
REFERENCE CTRY ID.	SHIP	LATITUDE	LO	NGITUDE HO	'A/ 2S SQU		STATION T		YEAR	ORIG	STATIC	-	DEP	DEFIR	OBS	WAVE ERVATIONS		CODES		ST	OOC	
311506			/10 N 0.7	1/10 =	10°		MO   OAY H		1969	NO.	NUM8	ER	023	S'MPL'	S DUL	NGT PER S	Z8	TYH AM	T		OOO6	
311700		771001		2400#1	ļ	COLOR	TER V	/INO SM ED	BARC	AIR 1	EMP. T	V15.	NO OBS	SPE	CIAL	1 1	1 20	' '1	í	, ,	,000	
						CODE	trans. Dir.	FORCE SO1	(mbs	BULR	BUL	.8 2	DEPT 07	HZ OBSEK	ATIONS							
	MESSENG TIME	CAST OF NO.	CARO	OEPTH (m)	,	'n	5 %.	SIGM		SPECIFIC VO	LUME	₹ △ D		SOUND	0 <sub>2</sub> ml/1	PO <sub>4</sub> -P	TOTAL-P	NO <sub>2</sub> -N	NO3-N	St O4-Si		s
	HR 1/10	1	TYPE		-			-		ANOMALY-	319	x 10 <sup>3</sup>		ELOCITY	02 11101	µg - e1/l	νg - σι/Ι	µg - at/1		yg - o₹/I	рΝ	c
	04	2 (	OBS	0025		182	32700	263		00360	1			4380		1	1		1 1	,		11
	STI STI 042 OBS			0030 0050	-0	182	3271 3273	263 263	36	00169			1	4381								
	042 OB:		STD	0050 0075	-0	182 175	32727 3289	263	9	00154	52		1	4384								
			STD	0075	-0	175 170	32894 3298	264	6	00147	99		1	4394								
	04;	2 (	STO	0100 0125	-0		32978 3377	265	8	00089			1	4402 4450								
	04	2 (	STD DBS	0150 0150	-00	)54 )54	3428 34279	275	7	00052				4483 4483								
	04		STO DBS	0200 0200	-00	27	3446 34459	277 277	0	00039	69		1	4506 4506								
	04		OBS	0230		16	34540	277						4517								

REFERENC	- 5	НІР	LATITUD	E LON	IGITUDE NOUTE	SQU SQU	DEN ARE	STATION TIA	A E	YEAR		STATION		TO	MAX. DEPTH OF	3280	WAVE RVATIONS	THER	CODES	NODC STATION NUMBER
COOE NO		300		/10	· 1/10 0 =	10*	1° M	O DAY HE	.1/10		NO.	NUMBER	- 8	MOTTO	"MPL"S	OB.	1GT PER SE		TYPE A MT	<del>'</del>
31150	06	-	79160	N 07	2480W	260	92 0 WATE		28 ]	969	KB2 00	) 7 MP. ℃	<u> </u>	237		\	}	43	X   9	0007
							COLOR 1	EANS, DIR	SPEED	METE	R ORY	WET	CODE	OBS. CEPTHS	SPEC SERV					
							COOE	(m)	FORCE	(mbs		9019	+			-				
	_							00	500	237		5	5	07			00 0		NO. N	NO3-N \$104-\$1
	MI	ESSENGR D	CAST NO.	CARD	DEPTH (m)	T	℃	s °4.	SIGN	T-A	ANDMALY-	UME 0	Δ D γN, M. κ 10 <sup>3</sup>	VEFOC ZONY		O 2 ml/1	PO4-P yg - 01/1	101AL-P 101a - gu	NO2-N pg - al/l	h8 - 01/1 h8 - 01/1 bH C
	H	R 1/10				_														
	1		1 1		1	'	ı		•			·			Ţ,					
		128		OBS	0025 0030		182 182	32727	263		001678	3 3		143						
				STD	0050		181	3271	263		00168			143	85					
		128		OBS	0050 0075		181 173	32710 3281	263		00161	2.5		143 143						
		128		STD OBS	0075		173	32807	264	42				143						
		120		STD OBS	0100 0100		151 151	3303 33028	265		00144	53		144						
		128		STD	0125		110	3358	270	03	00103			144	43					
				STD	0150		076	3400 33996	27:		00072	85		144						
		128		OBS STD	0150 0200		076 027	3442	27		00042	74		145	06					
		128		OBS	0200		027	34419	270					145						
		128		085	0230	-0	017	34561	27	10										
REFERENC	_	SHIP	LATITUO	)F 10	NGITUOE JOURNAL BA	301	SOEN	STATION TI	ME	YEAR	CRUISE	STATION	-	DEPTH	DEPTH	085	WAVE ERVATIONS		CODE	STATION
CODE N	0.	3005	•	1/10	. 1/10 g Z	10*	10 /	H YAG   ON	R,1/10		NO.	NUMBER	1	воттом	S'MPL"	S OR.	HGT PER 5	EA CDD	TYPI AN	
3115	06	-	79160	ON 07	2480W	260				1969		0.8 EMP. °C	- 10	237		$\perp$		ı	1 11	0008
							COLOR	TRANS. OIR	SPEED OR		ER ORY	WET	ZIV SGGS	SHT930		CIAL /ATIONS				
							CDDE	(m)	FORCE			BULB	+							
	_		т-т			_		00	500	23		1-	8	07	T		T.,	Ī		100 N EIO E
		AESSEN GR TIME	# NO.	C ARD TYPE	OEPTH (m)		T *C	s */.	SIG	MA-T	SPECIFIC VO	X107	E A D YN. M. X 10 <sup>3</sup>	VELO		0 2 ml/l	PO4-P µg = a1/I	101A L-1		
	ľ	IR 1/10	-			-			+											
	1	200	ı (	OBS	0025	, –0	176	32733	26	36	'			143	83		,			
				STD	0030		176	3273 3274	26 26		00167			143						
		200	)	STD	0050 0050		)176 )176	32736	26		00100	0,5		143	87					
				STD	0075 0075		173	3282 32817	26 26		00160	48		143						
		200	)	OBS STD	0100		160	3298		55	00148	15		144	107					
		200	)	OBS	0100		160	32979		55 06	00100	0.8		144						
				STD	0125 0150		0119	3362 3409		43	00065			144	467					
		200	)	OBS	0150		0083	34094		43 75	00035	0.6		144	467 508					
		200	1	STD OBS	0200 0200		0024 0024	3452 34522		75	00000	00			508					
		200		OBS	0235	-(	0014	34566	27	78				145	519					
											1 000	GINATOR"			T MA	L I	WAVE		A. CLOU	ın unanı
	10.	SHIP	LATITU	IDE L	ONGITUDE IN	3 20	ASOEN DU ARE	STATION	1	YEAR	CRUISE	OITATE	N	DEPTH TO BOTTOM	DEPT	N 08	SERVA TIO	- 00	R COD	ES STATION NUMBER
C008	NO.			1/10	1710	10		MO DAY			NO.	NUMBI	:K		SWA	L'S OR	HGT PER	5EA 001	TTPE A	
3115	506		7916	ON O	72480W	126	0 92		MIND	BA BA	AID	009 TEMP. C	VIS	0237 NO.		PECIAL	] ' '		1 14	4   0009
							COLOR	TRANS. DIR.	SPEE OR FORG	OLAE	TER DRY		COO	DEPTHS	OBSER	VATIONS				
							10000	00	500		51 -06		8	07			1			
		MESSENG	CAST	CARD	050314 (-1	Т	т °c	s °/			SPECIFIC V				UND	O <sub>2</sub> ml/	PO4-1	TOTAL		N NO3-N 2104-21 PH C
		HR 1/1		TYPE	DEPTH (m)			3 7	310	GMA-T	ANOMAL	/-X107	₹ △ 0 0YN. N x 10 <sup>3</sup>	. VEL	OCITY	07 1110	μg + αt,	'l µg - al	/1 µg - at,	/I µg - at/I µg - at/I C
			1	1	1						1	- 1		1,	200	l			1	1 1 11
		22	1	OBS STD	0025 0030		0182 0182	32723 3272		535 535	0016	799			380 381					
				STD	0050	-	0180	3272	26	535	00168			14	385					
		22	1	OBS STD	0050 0075		0180	32720 3277		535 539	00164	+11			385 394					
		22	1	OBS	0075	-	0172													
		22	1	STD OBS	0100 0100		0157 0157	3301 33014		558 558	0014	054			409 409					
		22	1	STD	0125	-	0118	3364	2	708	00098			14	440					
		22	1	STD OBS	0150 0150		0082	3409 34093		743 743	0006	520			467					
		22	4	STD	0200	-	0022	3449	2	773	0003	759		14	509					
		22		OBS	0200 0235		0022	34490 34580		773 7 <b>7</b> 9					509					
		22	1	OBS	0230		0015	34380	- 2	117				1.4	220					

REFERENCE CIRY IO.	SHIP	LATITU		GILNOE THE	A RESOEN SOUARE	STATION TIA	YE.	AR (		ATOR'S		OEPTH TO ROTTOM	MAX. OEPTH OF S'MPL'S	OBSER	VAVE RVATIONS	WEA- THER COOE	CLOUG		S1 N	ODC ATION UMBER	
311506		7916	0N 072	1/10	260 92	05 10 0	44 19	69	KB2 01	0		0237	3		10,712,31	28	X 9			0010	
					COLOR	TRANS. OIR.	SPEEO	RARO- METER (mbs)		WET RULR	VIS.	NO. OBS. OEPTHS	SPECIA OBSERVATI	ONZ							
					Cook	1	500		-170		2	07									$\neg$
	MESSENGR TIME HR 1/10	NO.	CARO TYPE	OEPTH (m)	T *C	5 %.	SIG MA-	-1	SPECIFIC VOLL	IME 0	E A D YN, M. X 10 <sup>3</sup>	SOL	OCITY 02	m1/1	PO4-P µg = 01/1	101AL-P ug - 01/1	NO2-N pg - at/I	ИО3−И И0 - 01/I	51 O4-5i µg - a1/1	рН	C
					0170	22727	2626					14	382								
	044	+	08S STD	0025	-0179 -0179	32737 3274 3273	2636 2636 2636		001669 001672			143	383 386								
	044		OBS	0050	-0179 -0179	32730 3286	2636 2646		001572			143	386 397								
	044	4	STD 085	0075 0075 0100	-0169 -0169 -0161	32860 3296	2646		001495			14	397 406								
	044	4	OBS	0100	-0161 -0094	32960 3371	2654 2713		000940			14	406 452								
	044	,	ST0 ST0 OBS	0150	-0047 -0047	3423 34227	2753		000564			14	485 485								
	044		STD	0200	-0014 -0014	3457 34573	2779		000317	0		14	514 514								
	044		085	0235	-0008	34611	2782					14	523								
													MAX.								ì
CTRY IO,	SNIP	LATITU	1	101100E   10 10 10 10 10 10 10 10 10 10 10 10 10	SOUARE	STATION THE	YE	AR	CRUISE	STATION NU MEE	4	TO ROTTOM	OEPTH OF	OBZE	WAVE RVATIONS	WEA- THER CODE	CLOUD CODES		\$	MODC TATION UMBER	
311506		7916	ON 07		260 92	05 10 1	26 19	69	KB2 01	1	-	0237								0011	
					COLOR		SPEED OR FORCE	BARO METER (mbs)	ORY	MP. °C WET BULB	VIS.	NO. OBS. DEPTHS	SPECIA OBSERVATI								
			_				500	288			7	07									
	MESSENGI TIME HR 1/10	V NO.	CARO TYPE	OEPTH (m)	T *C	5 %.	SIGMA	-т	SPECIFIC VOLI	JME 10 <sup>7</sup>	Σ Δ α α αγν. Μ χ 10 <sup>3</sup>	. VEL	OCITY O	2 ml/l	PO4-P µg + ai/l	fOTAL-P pg = ol/l	NO2-N ug - at/l	NO3-N	SI O4-Si µg - al/I	рН	c
			1		010/	22712	2624			1		3.6	378								
	12	4	OBS	0025	-0186 -0184	32712	2634	)	001742			14	379 384								
	12	4	STD OBS	0050	-0178 -0178 -0172	3254 32541 3280	2620 2620 2642	)	001615			14	384 394								
	12	4	STD 085 STD	0075 0075 0100	-0172 -0172 -0160	32804 3294	2642	2	001509			14	394 406								
	12	4	08S STD	0100	-0160 -0091	32943 3369	2653 2711	}	000957			14	406 453								
	12	<i>l</i> .	STD OBS	0150	-0043 -0043	3421 34214	2751		000576	7			487 487								
	12		51D 085	0200	-0009 -0009	3462 34617	2782	2	000286	1			517 517								
	12		085	0235	-0007	34615	2782	2				14	523								
REFERENCE CTRY JO.	SHIP	LATITU	JOE FO	ACITNOE PER STOOT	A/ ISOEN	STATION 31		EAR	ORIGII CRUISE	NATOR'S		DEPTH	UEFIAL	OBSE	WAVE RVATIONS	WEATHER				NODC TATION	]
CODE NO.	COOE	7000	1/10	1/10 =		MO OAY HE		26.0	NO.	NUMBE	R	ROTTON	S'MPL'S	OIR	NGT PER SE	COOL	TYPE AN			0012	
1311506	)	1916	ON   07	2480W1 1	WA	TER W	SPEED	BARO METE	-	MP. °C	1,000	0237 NO. OBS.	SPEC1A OBSERVAT	L CONS	1 1	'	1 12	'	'	0012	'
					CODE	TRANS. OIR.	FORCE SO4	288	BULE	BULL	8	OBS. DEPTHS	Coscarat								
	MESSENG	CAST NO.	CARD TYPE	DEPTH (m)	1 %	5 %.	SIGMA		SPECIFIC VOL	UME 1197	₹ Δ 0 0YN. M	so	UNO O	2 ml/l	PO4-P	101AL-P	NO3-N	NO3-N	\$1 O4~\$i	рН	S C
	HR 3/10	0								$\dashv$	X 103	-			JQ - 0171	) y v 01/1	pg = 007	yg + al/l	pg - diyi	-	+
	16	6	08S STD	0025	-0173 -0176	32714 3272	2634		001686	4			384 384								
	16	6	STD OBS	0050	-0179 -0179	3272 32720	2635	5	001680			14	386 386								
	16	6	ST0 085	00 75 00 75	-0168 -0168	3281 32808	2642		001612	9			396 396								
	16	6	5T0 085	0100 0100	-0164 -0164	3294 32940	2652 2652		001510	)5			404 404								
			STD STD	0125 0150	-0095 -0046	3365 3417	2708 2748	3	000986			14	451 485								
	16		OBS STD	0150 0200	-0046 -0007	34171 3462	2748 2783	3	000281	. 9		14	485 518								
	16 16		085 085	0200 0235	-0007 -0007	34624 34620	2783						518 523								

REFEREN	_	SHIP	LATITU	DE LO	NGITUDE B	SQUARE	TATION TIN		EAR C		ATOR'S		OEPTH TO	MAX		WAVE RVATIONS	WEA-	CLOUD		NODC STATION
CODE	10. NO.	COOE	•	1/10	1/10	Z 10° 1°	MO DAY HE				TATION		BOTTOM	S*MPL	S OIR.	HGT PER SEA	0000	TYPE AMT		NUMBER
3115	506	I	7916	ON 1 07	2480W	260 92 WA		99 19		KB2 01		$\Box$	0237		اا		42	5		0013
						COLOR	TRANS. OIR.	SPEED	BARO- METER (mbs)	ORY BULB	WET	COD	ND. OBS. GEPTHS	OBSER'	VATIONS					
						CODE		SO5	288	-096	600	7	07							
	ſ	MESSENGR	CASI	CARD		7.50		· · · · ·	,	PECIFIC VOLU	ME S	Δ D		סאנ		PO <sub>4</sub> -P	TOTAL-F	NO <sub>2</sub> -N	NO3-N	S1 O4-Si 5
	- 1	TIME   HR 1/10	7 NO.	TYPE	DEPTH (m)	7 °C	s ·4.	SIGMA	1-1	ANDMALY-X	07 01	rn. M x 10 <sup>3</sup>	, AETO	CITY	O2 ml/I	μg - at/I	µg = a1/1	νg - αl/l	hå - a1/1	μg - α1/L ρΗ C
											1									
		199	1	08S STD	0025 0030	-0181 -0180	32728 3273	2636		001675	5			381 382						
				STD	0050	-0178	3273	2636	6 (	001672				386						
		199	)	08S STD	0050 0075	-0178 -0168	32730 3280	2636		001620	5			386 396						
		199	•	085	0075	-0168	32798	264		001513	2			396						
		199		ST0 085	0100	-0162 -0162	3294 32937	2652		001513	2			405 405						
				STO	0125	-0094	3367	2709		000971				452						
		199		STD OBS	0150 0150	-0046 -0046	3419 34189	2749		000594	4			485 485						
				STO	0200	-0008	3461	2782		000289	7			517						
		199		08s 08s	0200 0235	-0008 -0006	34613 34625	2782						517 524						
		~ / /		***																
REFEREN	_	SHIP	LATITU	DE LO	INGITUDE \$	SOUARE	STATION THE		EAR C		ATOR'S		OEPTH TO	MAX		WAVE ERVATIONS	WEA-	CLOUP		NODC STATION
	NO.	COOE	•	1/10	1/10	7	MO   DAY HR				NUMBER		BOTTOM	S'MPL		HGT PER SE	0005	TYPE AMI	Ī	NUMBER
3115	506	- 1	7916	ON 107	2480W				969	кв2 01		$\downarrow \downarrow$	0237	_	!		42		1	0014
						COLOR	TRANS. DIR.	SPEEG DR	-ORAB RETER	ORY	WET	VIS	ND. OBS. OBSTHS	OBSER	ECIAL VATIONS					
						CODE	(m)	FORCE	(mbs)	BULB	SOFB	1.	07		-					
	ſ	MESSENGR	T202	CARO					288	PECIFIC VOLU	ME ≤	4 △ o	1	סאט		PO <sub>4</sub> -P	TOTA L-P	NO2-N	NO <sub>2</sub> -N	SIO4-Si S
		TIME -	" NO.	TYPE	DEPTH (m)	1 %	s */.	SIGMA	\-T   '	ANOMALY-X	07 D	YN. N X 10 <sup>3</sup>	. VET	DCITY	O2 ml/1	yg - at/(	υg - ot/l		NO3-N NO - 01/I	yg - at/1 pH C
		042	!	OBS STD	0025	-0178 -0179	32721 3272	2639		001678	8			382 383						
				STD	0050	-0180	3274	2636		001666			14	386						
		042	!	08S STD	0050 0075	-0180 -0171	32737 3285	2636		001580	7			386 396						
		042	2	085	0075	-0171	32849	264	5				14	396						
		0 4 2		STO OBS	0100	-0152 -0152	3304 33041	2660		001436	0			411 411						
		0 72		STD	0125	-0100	3378	271	9	000885			14	450						
		042	,	STD OBS	0150 0150	-0060 -0060	3428 34282	275		000517	2			480 480						
				STD	0200	-0015	3456	2778	В	000323	3		14	513						
		042		OBS OBS	0200 0235	-0015 -0008	34564 34619	2778						513 523						
		0.2	•																	
REFEREN		SHIP	LATITU	DE LO	NGITUDE 5	A, ISDEN	STATION TIN		EAR C		ATOR'S		OEPTH TO	MAX	. )	WAVE	WEA-	CLOUD		NOOC
CODE N	NO.	COOE	•	1/10		10" 1"	MO DAY HR		C		TATION		BOTTOM	S'MPL		HGT PER SEA	CODE	TYPE ANT	1	NUMBER
3115	506	- 1	7916	ON 07	2480W	260 92 WA		21 19		KB2 01			0237		1		43	8		0015
						COLOR		SPEED	BARO- METER	URY.	WET	COD	OBS. DEPTHS	SPI ORSER	CIAL					
						COOE	1	FORCE	(mbs)	BULB	BULB	5								
	[	MESSENGR	CAST	CARD				504	268	F110	ME &	Δ M	70	JND		PO4-P		NO <sub>2</sub> -N		
		MESSENGR TIME HR 1/10	NO.	TYPE	DEPTH (m)	T %	s */.	SIGMA		ANOMALY-XI	07 DY	(10 <sup>3</sup>	, AETO	CITY	02 ml/I	yg - a1/1		NO2-N pg - 01/l	NO3-N HB + 01/1	51 O4-51 µg - ot/1 pH C
	-		{																	
		121		OBS STD	0025 0030	-0179 -0180	32721 3272	2635		001681	0			382 3 <b>8</b> 2						
				STD	0050	-0181	3272	2635	5 (	001677			143	385						
		121		OBS STD	0050 0075	-0181 -0173	32723 3280	2635		001617	1		141	385 394						
		121		OBS	0075	-0173	32801	264]	l				141	394						
		121		ST0 08S	0100 0100	-0167 -0167	3295 32950	2653 2653		001502	1		144							
				STO	0125	-0100	3363	2706	5 (	000999			144	448						
		121		STD OBS	0150 0150	-0052 -0052	3413 34128	2745		000638	1		144							
				STD OBS	0200	-0011	3460	2781	. (	000301	1		145	515						
		121		OBS	0200 0235	-0011 -0007	34596 34628	2781 2783					145							

REFERENCE SHIP	UDE LONG	CHOOF 50	W/ RSOEN SQUARE	STATION TIME	YEAS	ORIGINATO	_	OEPTH TO	MAZ, DEPTH OF	WAVE OBSERVATIONS	WEA- THER	CLOUG		STA	OC TION
CODE NO.	1/10			MO DAY HE		NO. NUM	BER	80TTOM	S"MPL"S	DUR. HIGH PER SE	48	TYFE AMT			D16
1 311506l   7916	50N   072	480WI 12	WAT		BARC	AR TEMP.	VIS.	0237 NO. 085.	SPECIAL		1 40	, ,,	1	, ,	710
			COLOR	IRAN'S OR.	OR (mbs		ET CDD	OEPTHS	ORSERVATIO	ONS.					
				33 5	04   25	7 -116		07							
MESSENGE CAST TIME OF NO. HB 1/10	CARD TYPE	OEPTH im1	7 %	s *4.	SIGMA-T	SPECIFIC VOLUME ANDMALT	₹ △ 0 0 N. M 10 <sup>3</sup>	. AFFO		ml/l PO4-P yg - at/l	TDTA L-P pg - at/l	NO2-N yg - at/l	NO3-N yg - at/l	SI O4-Si pg - at/I	рн с
HS 1710	1														
200	OBS STD	0025 0030	-0178 -0180	32711 3271	2634 2634	0016879		143 143							
	STD	0050	-0182	3272	2635	0016835		143							
200	OBS STD	0050 0075	-0182 -0171	32715 3284	2635 2645	0015853		143	195						
200	OBS STD	0075 0100	-0171 -0160	32843 3303	2645 2659	0014447		143 144							
200	OBS STD	0100 0125	-0160 -0108	33027 3360	2659 2704	0010199		144							
	STD	0150	-0066	3405	2739	0006923		144	74						
200	OBS STO	0150 0200	-0066 -0010	34049 3461	2739 2781	0002947		144 145							
200 200	OBS OBS	0200 0235	-0010 -0007	34605 34622	2781 2783			145							
200	000	0233		3.022											
REFERENCE SHIP LATTI	UOE LON	CUIDE POP	W/ RSOEN SQUARE	STATION TIM	YEAR	CRUISE STAT	10N	DEPTH TO ROTTOM	MAR. OEPTH OF	OBSERVATIONS	THER	COOES		STA	TION MARE
COOG NO.	1/10		1	MO DAY HR		KB2 017	BER	0237	S'MPL'S	DIR. HGT PER SE	73	TYPE AMT			017
311506 7916	50N 1072	1480W   2	WAT	ER WIP	IO BAR	AR TEMP.	VT.	NO.	SPECIA		, , ,	1 10	1	1	VI.
			COLOR	INCH'S OR	OR (mbi		JLR COD	OEPTHS	DESERVATI	ONS					
	1	1		33 5	07   25		4	07							
MESSENGE CAST TIME OF NO. HR 1/10	TYPE	OEPTH (m)	т 1с	s ·/	SIG MA-T	SPECIFIC VOLUME ANOMALY—X107	₹ △ 0 0YN. W 110 <sup>3</sup>	r. AEFO		ml/l PO4-P	Pg - el/I	NO2-N yg - at/l	NO3-N pg + at/1	SI O4-Si pg - at/I	рн С
	1														
222	OBS STD	0025 0030	-0178 -0180	32716 3272	2635 2635	0016825		143							
222	STD OBS	0050 0050	-0182 -0182	3273 32730	2636 2636	0016719		143							
	STO	0075	-0172	3280	2642	0016150		143	94						
222	OBS STD	0075 0100	÷0172 -0159	32804 3305	2642 2661	0014296		143 144	80						
222	OBS STD	0100 0125	-0159 -0107	33047 3358	2661 2703	0010356		144							
222	STD	0150 0150	-0064 -0064	3403 34026	2737 2737	0007106		144							
	STD	0200	-0009	3462	2782	0002846		145	517						
222 222	085 085	0200 0235	-0009 -0007	34619 34633	2782 2783			145							
REFERENCE						т				_					
CTRY IO. COOE LATT	- 1	GITUOE ES	SQUARE	STATION TIME	YEAR	CRUISE STAT	ION	DEPTH TO ROTTOM	MAX. OEPTH OF	WAVE OBSERVATIONS	WEA- THER	COOES		STA	
<del>                                      </del>	1/10 50N 072	1/10 = 480w 2		MO DAY NET		NO. NUM	BER	0237	S'MPL"S	DIR. HIGH PER SE	44	TYPE AMT		NUA	
311300. 1771	3011 1 0 12		WAT	ER WIN	RARC	AR TEMP.	ZIV	NO.	SPECIAL	]'''	[ 44 ]	18		1 00	018
			CODE	ten) OIR.	OR (mbs	R ORY W	ET COD	DEPTHS	OBSERVATIO	DNS					
MESSENGE CAST			11	03 S	02   23		5	07		1		I			
HE 1/10	CARO TYPE	OEPTH (m)	1 %	s */	SIGMA-T	ANDMALY-2107	₹ ∆ 0 8 ∧ 0 103	. AEFO		mi/l PO4-P µg = et/l	1/10 - 84	NO2-N ug - ot/1		\$1 O <sub>4</sub> —\$i yg = at/1	PH C
	000	20.25	0175	22716											
041	OBS STD	0030	-0175 -0177		2634 2635	0016846		143 143							
041	STO OBS		-0181 -0181		2635 2635	0016775		143 143							
	STO	0075	-0173 -0173	3282	2643	0016056		143	94						
041	OBS STO	0100	-0163	3299	2643 2656	0014739		143	05						
041	OBS STO		-0163 -0109		2656 2706	0010043		144							
041	STD OBS	0150	-0065 -0065	3409	2743 2743	0006591		144	75						
	STD	0200	-0009	3459	2780	0003059		144	16						
041 041	08S		-0009 -0007		2780 2782			145 145							

REFERENCE CTRY ID.	SHIP	LATTU	DE	LONGITUDE		SDEN	STATION TIA	AE	YEAR	CRUISE	ANIDE	TOR'S	$\exists$	DEPTH TO	DEPT	H ORSE	WAVE ERVATIONS	WEA- THER	CLOUD		9	NODE
CODE NO.	CODE	•	1/10	1/19	10°		MO DAY HR			NO.		JMRER		юттом	S'MPL		HGT PER SE	CODE	TYPE AM		- '	OOLO
311506	ol I	7916	ON I	072480W	260	92 ] WA		ND	1969	A.I	019 E TEM!		VIS	NO.	SP	ECIAL	1 1	ı	' '	1	- 1	0019
						COLOR	TRANS. DIR.	OR FORCE	M ETE (mbs	R DI		WET BULB		ORS. DEPTHS	D8SER	PATIONS						
					,		00	500	224	4 -11	0			07								
	MESSENGR TIME	CAST NO.	CAR TYP		1	℃	s ·4.	SIGA	AA-T	SPECIFIC	VOLUM 7-210 <sup>7</sup>	E OY	A. M. 103		OCITY	O2 ml/l	PO4-P yg = st/l	9-JATOT	NO2-N ug - at/1	ND3N pg - ot/I	SI D4-S yg - ol/	
	HR 1/10				+		1							1								
	123		08S		_	149 156	32721 3272	263 263		0016	876				396 393							
	120		ST	D 0050	-0	173 173	3271 32712	263 263	34	0016					389 389							
	123		OBS	D 0075	-0	175	3278	264	+0	0016	343			14	393							
	123		085 51		-0	175 165	32778 3294	264		0015	087				393 404							
	123		OBS			165 109	32942 3357	265		0010	425				404 443							
	120		ST	D 0150		065 065	3406 34062	274		0006	828				475 475							
	123		ST	D 0200	-0	012	3461	278	32	0002	899			14	515							
	123 123		08S			012 008	34610 34613	278							515 523							
					, —					,					1					_		
CTRY ID.	SHIP	T9160N 072480W 260 92 05 12 20 WATER WIN COLD TRANS ON FR. 1							YEAR	CRUISE		ATION	⊢,	DEPTH TO BOTTOM	DEPTI OF	OBSE O	WAVE RVATIONS	WEA- THER CODE	CLOUD		9	NODC TATION NUMBER
311506		7916	ATTIUDE   LONGITUGE   SQUARE   GMT    YEAR   CRUINDE   10°   1°   MO   OAY   NEL1/10   ND   NEL   NE								020	IMRER	-	237	S'MPL	. DOL.	HGT PER SE	0000	TYPE AMI		-	0020
. 511500	' '	1910	014 1	012400#1	TER WI	ND	BARO	All	TEMP		ZIV	NO. 085.		ECIAL	, ,	1		'	,	0020		
						COOE	(m) DIIC	FORCE	(mbs	) 601	.8	BULB	CODE	DEPTHS	ORSER	2 NOTE AV						
	MESSENGR	CAST			1	<u> </u>	36	502	210			.   5		07		I	1.0					
	TIME 0 HR 1/10	HO.	TYPE		℃	s */	SIGN	A-T	SPECIFIC S	7-2197	X DYI	∆ 0 H. M. 10 <sup>3</sup>		OCITY	O2 ml/t	PO4=P µg = e1/1	PB - et/I	NO2-N ug - al/l	ND3-N yg - ot/l	Sł O <sub>4</sub> -\$. yg - ot/	pH C	
	200		086	0005		174	32058	250						14	374							
	200		OBS ST			176 177	3224	258		0020	516				377							
	200		ST OBS			178 178	3272 32718	263		0016	819				386 386							
	200		ST	D 0075	-0	173 173	3281 32806	264	12	0016	133			14	394 394							
			ST	D 0100	-0	160	3295	265	53	0015	053			14	406 406							
	200		OBS ST	D 0125	-0	160 103	32948 3365	265	8 (	0009				14	447							
	200		ST OBS			059 059	3416 34155	274		0006	144				479 479							
	200		ST OBS			011 011	3461 34605	278 278		0002	942				516 516							
	200		085			800	34620	278							523							
REFERENCE				1 -	W/R	DEN T	MIT NOITATE	F		OR	GINAT	OR*S		DEPTH	MAX		WAVE	WEA-	CLOUD			None
CTRY ID.	CODE	LATTU	DE 1/10	LONGITUDE 17/10	10*	ARE	MO   DAY HR		YEAR	CRUISE ND.	STA	TION	_	TO	OF OF	4 ORSE	RVATIONS	THER	CODES TYPE AMT		5	NODC TATION IUMBER
311506		7916		072480W	260	92	05 12 22	25 1	969	KB2	021		- 4	237			10112		0		$\neg$	0021
						COLOR		SPEED OR	BARO	R DR		WET	VIS.	NO. ORS.		ECIAL VATIONS						
						CODE	(m)	101CE	200	_		RULR		07		_						
	MESSENGR	CAST	CARI		Τ,			SIGM	1	SPECIFIC V	OLUME	. <u>\$</u>	A 0.	SDL	JND	0	PO <sub>4</sub> -P	TOTAL-P	NO2-N	ND3-N	St D <sub>4</sub> -Si	3
	MESSENGE CAST TIME OF NO. TYPE DEPTH (m) T THE NO. TYPE						s ·/.	SIGM	^-1	AHOMAL	7-X107	X	103	VELC	CITY	O2 mt/1		μg - α1/1	ug - at/1	μg = αt/l	νg - σ1/1	PH C
	225 OBS 0025 -0						   32715	263	  4			1		143	384 384			- 1	1	ļ		
	STD 0030 -03						3272 3272	263	4	0016				143	386 392							
	225 OBS 0050 -01						32716	263	4					143	392							
	STD 0075 -01 225 OBS 0075 -01					175	3278 32776	263 263		0016				143	393 393							
	STD 0100 -010 225 OBS 0100 -010						3294 32938	265 265		0015	120			144								
	STD 0125 -01					100	3397 3459	273	4	0007				144	453							
	225 OBS 0150					053	34591	278	2					144	488							
	225		ST OBS			010 010	3459 34594	278 278		0003	031			145								
	225		OBS	0235	-0	007	34619	278						145								

									, , ,							
REFERENCE SHIP		OHGITUOE SOUTIONO.	M/ RSDEN SOUARE	STATION TIN	YEAR	ORIGINATO	пон	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	OBSERY	A VE VATIONS	WEA- THER CODE	CLOUD CODES		S	HODC TATION UMBER
	79160N 0		260 92		42 1969	KB2 022		0237	2 WIF 3	DIC INC	I PER SEA		1			0022
			COLOR	TRANS. OIR.	SPEED METE	R ORY V	VET COD	NO. OBS. OEPTHS	SPEC OBSERVA							
				20	502 18		8	07		1						
MESSENGR TIME O HR 1/10	CAST CARD	DEPTH (m)	r °c	5 %.	SIGMA-T	SPECIFIC VOLUME	₹ △ 0 0 YH. M 103	SOL VELC	DCITY			DTAL-P	NO2-N	NO3-H NO3-H	\$1 O4-\$i ug - 01/1	pH C
	OBS	0025	-0178	32711	2634			14	382							
042	STD	0030	-0178 -0179	3271 3272	2634	0016882 0016833		143	383 386							
042	STD 08S	0050	-0179 -0179 -0173	32716 3282	2635	0015994		14:	386 394							
042	STD OBS	0075	-0173 -0161	32824 3293	2643 2651	0015394		14	394 406							
042	STD OBS	0100	-0161 -0103	32928 3363	2651 2707	0009987		144	406 447							
0.4.3	STD STD OBS	0150 0150	-0059 -0059	3414 34139	2746	0006266		14	479 479							
042	STD	0200	-0013 -0013	3459 34586	2780 2780	0003076		145	514 514							
042 042	OBS OBS	0235	-0007	34603	2781				523							
REFERENCE SHIP	LATITUDE L	ONGITUDE JOURNO.	M/ RSDEH SQUARE	STATION THE	ME YEAR	ORIGINATO		DEPTH	MAX. OEPTH	OBSER*	AVE VATIONS	WEA-	CLOUG		2	NODC
CODE HO.	1/10	1/10		MO   OAY HE		NO. NU	MBER	80110M	OF S'MPL'S		OT PER SEA	CODE	TYPE AMI	-	N	UMBER
311506	79160N   0	72480W   .	260 92 WA1	ER W	SPEED MATT		°C VIS	0 237 NO. OBS.	SPEC		1 1	1	1	1	-	0023
			CODE	(m) Ginz	S10 18	1 BULE B	7	DEPTHS	OBSERVA	110/43						
MESSENGR TIME 0	CAST CARD HO. TYPE	DEPTH (m)	T ℃	s */.	SIGMA-T	SPECIFIC VOLUME	₹ ∆ C	SOL	UND	O2 ml/l		DTAL-P	NO2+N	NO3-N	SI O4-Si	рН С
HR 1/10							N 10 <sup>3</sup>	4500	30111		9 • 01/1 .	µg − ol/l	yg = at/1	NB - 61/I	yg = al/l	·
125	OBS	0025	-0177 -0178	32716 3272	2635 2635	0016852	•		383 383	'		ľ	'			·
125	STD		-0179 -0179	3272 32715	2634 2634	0016840		14:	386 386							
125	STD OBS	0075 0075	-0172 -0172	3278 32775	2639 2639	0016373		14:	394 394							
125	STD OBS	0100 0100	-0163 -0163	3297 32972	2655 2655	0014862			405 405							
	STD STD	0125 0150	-0099 -0052	3366 3416	2709 2 <b>74</b> 8	0009772			449 482							
125	OBS STD	0150 0200	-0052 -0012	34163 3460	2748 2781	0002998			482 515							
125 125	085 085	0200 0235	-0012 -0007	34597 34618	2781 2782				515 523							
REFERENCE	LATITUDE	ONGITUGE SE	M/ RSOEH SOUARE	STATION TIA		ORIGINATO	DR*S	OEPTH	MAX. DEPTH	W	AVE	WEA-	Cronp		Τ,	1000
CODE HO. CODE	1/10	ONGITUGE DO		MO DAY HR	.1/10 YEAR	HO. NUA		BOTTOM	1 30	DIR HO	ATIONS	CODE	TYPE AMT		S1	ATION UMBER
<sup>1</sup> 311506l l	79160N   0	72480W   1	WAT	ER W	83 1969 HD RARG		°C vis.	0 23 7 NO.	SPEC	141			8			0024
			COLOR	(m)	SPEED METE	} GULB G	LET COD	DEPTHS	OBSERVA	TIONS						
MESSENGR TIME O	CAST CARD	OEPTH (m)	T °C	08	S15 186	SPECIFIC VOLUME	8	500	IND		PO4-P TI	DTAL-P	HO2-N	HO3~N	SI Da-Si	- [5
HR 1/10	NO. TYPE				310mA=1	ANDMALY-2107	x 10 <sup>3</sup>	, AFFC	CITY				μg - et/1	μg - ot/l	yg - al/l	рН С
183	OBS	-0174	32718	2635	001/000	I	143		- 1	- 1	1	1	ļ		11	
192				2634	0016902		143	386								
183	STD	STD 0075 -0171 3280 2		2634	0016191		143	395								
	STO 0100 -0161 3294 2				2641	0015135		143	+06							
103	183 OBS 0100 -0161 32937 STD 0125 -0099 3357 STD 0150 -0054 3406				2652 2702	0010461		144	+48							
183	OBS	0150	-0054 -0054 -0013	3460	2739	0006891		144								
183 183	OBS OBS	0200 0200 0235	-0013 -0006	34597	2781	0002992		145	15							
103	003	7237	0000	34622	2782			145	24							

									Î	212														
REFERENCE	Τ.					W/ 85	OEN	STA	TION TIM	NE .			INATO		0	EPTH TO	MAX. OEPTH	Onsei	VAVE EVATIONS	WEA- THER	CLOUO		NOOC	
CTRY IO.	l c	OOE	LATITUO	E   1 1/10	IONGITUDE E	sou 10°		uo į	GAT HR	1/10	YEAR	NO.	NUM	ON BER	80		OF S'MPL'S	1	GT PER SEA	1000	TYPE AMT		NUMBER	
31150	6		79160	N O	172480W	260	92 0	5		99 NO	1969	AIR	25 TEMP. 1	c		237   NO.				1	8	ļ	00251	
							1	TRAN (m)	+	SPEED	METE (mbs	R ORY	W SU	ET CO	) DE	200	SPE	ATIONS						
							2006	-	08	510	139		+	7		07								
	м	ESSENGR	CAST	CARO	OEPTN (m)	Т	*c		s */.		MA-T	SPECIFIC VO	LUME	₹ △ OYN.	о м.	4U02		02 ml/l	PO4-P pg - a1/1	TOTAL-P	NO2-N μg - αl/l		104-5i 1/10 - g	S C
		TIME 0	NO.	TYPE		-		-		_			-	x 10	13	7000	-		7					+
		199		085	0025	-0	175	ا 32	721	i 26	35		'			143			'			,		•
		• / /		STO	0030		176 178		71	26 26		00169				143 143								
		199		085	0050	-0	178	32	709	26 26	34	00160	22			143								
		199		OBS	0075	-0	171 171	32	282 2821	26	43					143	95							
		199		STI OBS	0100		157 157		99 1989	26	56 56	00147	40			144	80							
		*//		ST			087		371 +21	27 27		00094				144								
		199		OBS	0150	-0	040	34	211	27	51	00030				144								
		199		OBS	0200		012		+58 +584	27	80	00030	, 90			145	15							
		199		085	0235	-0	006	34	+627	27	83					145	24							
REFERENCE	E	SHIP					SOEN		ATION TH	ME		ORI	SINATO		T (	DEPTH	MAX	DBS	WAVE ERVATIONS	WEA	CLOUG		NOOC	]
CODE NO	.   c	3005	LATITUO	1/10 _	LONGITUOE	10°	JARE 3"	MO	IGMTI DAY HI	21/10	YEAR	CRUISE NO.	TATE		80	MOTTO	OF S*MPL	1	NGT PER SE	COOK			NUMBER	-
31150	16		79160	) NC	072480W	260	92 WA1	05		42	1969	A ID	126 TEMP.	*C		237				73	X   8		0026	1
			COLOR TRANS   OIR   SPECIAL OF COLOR   SPECIAL OF C								ER ORY	W	\ \	77	NO. OBS. DEPTHS	OBSER	VATIONS							
								-				_		3	3	07								
	~	AESSENGR TIME					r °c	T	s *4.	SIG	MA-T	SPECIFIC V	OLUME	¥ ∆ oyn.	O.M.	SOU		O2 ml/l	PO 4-P	107AL-9 ug - 01/1	NO2-N		104-5i pH - pt/1	S C
	1	IR 1/10	NO.	TYPE		+		+		╁				X I	03									+
	-	042		085	0025		178		2707		34			1			382		'					
				ST			)178 )179		271 273		34	0016					383 386							
		042		085	0055	-0	179		2736 279		36 540	0016	269				387 393							
		042		ST OBS	0075	-(	174	3	2788	26	40	0014					393 408							
		042	:	ST OBS			)157 )157	3	297 2971	26	555 555					144	408							
				ST ST			0110		373 424		<b>7</b> 15 755	0009					445 475							
		0 4 2	2	085	0150	-(	0070		4244 458		755 7 <b>7</b> 9	0003	144				475 514							
		042	2	5T 08S	0200	_(	0013	3	4577	2.	779	0005				145	514 523							
		042	2	085	0235	-(	0007	3	4624	2	783					14:	525							
REFERENCE	_	SHIP	1 4 7171	05	TORCITION	¥4.7	RSOEN	s	TATION T		YEAR		IGINAT	OR'S	$\Box$	DEPTH		III OR	WAVE SERVATIONS	WEA			NOOC STATION	
CODE N	o. O.	COOE	*	1/10	1/18	10		MO	DAY		1	CRUISE NO.		MBER	-	воттом	S'MP	L"S DIR.	HGT PER	L.	1176		NUMBER	-
3115	06	١	EATHOUGH LONGHOUSE IS A SCOTAL							124 WINO			027 R TEMP	. %		)2 <u>37</u> NO.	1			73	1   X   8	3	0027	/1
							COLOS	R TRA	NS OR.	SPE	ED ME	TER OF		WET BULB	VII.	OBS. OEPTHS	OBSE	PECIAL RVATIONS						
		MESSINGS CAST CARD DEPTH (m)						ţ	07	50	5 08	35 -12	0	_	4	07			Ļ			1		
		MESSENG	CAST NO.	CAR			T ℃		s */**	\$1	GMA-1	SPECIFIC	VOLUME	₹ Z DYN	1. M. 10 <sup>3</sup>	SO	OCITY	O2 m1/	PO4-P	TOTAL-			\$1 O4-\$i µg - al/I	4 6
		HR 1/10	-	-		+		+		+		-		1						1				-H
	,	12	4	085			0176		2741 275		637 637	0016	623				383							
									276		638	0016				14	387							
		124 085 0050 -0178 3 STD 0075 -0172							2764 282		638 643	0016	043			14	387							
		124 OBS 0075 -0172 32 STD 0100 -0157 32						2818	2	643 656	0014					395								
		124 OBS 0100 -0157 329						2989	2	656					14	408								
	STD 0125 -0100 STD 0150 -0057						1372 1423		714 753	0009				14	481									
	124 085 0150 -005							34230 3458		753 780	0003	101				481								
	124 OBS 0200 -0014 34582 27						780					14	514											
								3	**018	4	702					7.4	,,,,							

																	·			
CTRY 10.	SHIP	LATITU		GITUDE JUNIO	W/ RSOEN SOUARE	STATION TIN	YEA			OR*S TION MRER	DE1	0   00	H OB!	WAVE SERVATIONS [HGT] PER   SE	WEA- THER CODE	CLOUD CODES	ļ		NOUC STATION NUMBER	
311506		7916	0N 07	1710		05 14 1	59 196	9 KB2	028		02		1	110174	70	x 8			0028	
					COLOR	TRANS. DIR	SPEED M	ETER (		WET CE	IS. OF	S. Dece	PECIAL EVATIONS							
					CODE	00	TORCE		85	7	+	-								
	MESSENGR TIME D	CAST ND.	CARD TYPE	DEPTN (m)	r °c	s -/	SIGMA-1		VOLUME	DIN.	M.	SOUNO	O 2 m1/1	PO4-P µg - ot/l	TDTAL-P	NO2-N #8 - al/l	NO3-N	SI O4-5		200
	HR 1/10							+		X 10	,						7			$\dagger$
	159	'	OBS	0025 0030	-0136 -0143	32718 3272	2634 2634	. 001	6922			14402								
	150		STD STO	0050	-0163	3271 32714	2634		6882			14393								
	159		OBS STD	0050 0075	-0163 -0173	3281	2642	001	6125			14394								
	159		OBS STD	0075 0100	-0173 -0161	32807 3303	2642 2660	001	4422			14394								
	159		OBS STD	0100 0125	-0161 -0101	33030 3379	2660 2719		8771			14407								
	159		STD OBS	0150 0150	-0057 -0057	3430 34300	2759 2759	000	5048			14482 14482								
	159		STD OBS	0200 0200	-0014 -0014	3457 34572	2779 2779	000	3177			14514 14514								
	159		OBS	0235	-0007	34671	2786				:	14524								
REFERENCE CTRY IO.	SHIP	LATITU	DE LON	GITUDE SOUTION	'A/ RSOEN SOU ARE	STATION TIA	AE YEA		ORIGINAT	OR'S	OE	O DEF	TH OB	WAVE SERVATIONS	WEA- THER	CLOUD			NODC	
CODE NO.	COOE	•	1/10	· 1/10 0 =		MO DAY HE	.1/10	NO.	NU	MBER	801	3 ///		HGT PER SE	Loopr	TYPE A MI		+	NUMBÉR	
311506	ł I	7916	ON 107	2480WI 1	WAT	ER W	IND 8	ARO-	029	v	0 2	D. 5	PECIAL	' ' '	1	10	1	- 1	0029	
					COLOR	TRANS OIR	OR FDRCE			RULB	DEP	IMZ ORZE	RVATIONS							
	MESSENGR		CARD					CHECKIN	92 VDLUMI	8 ≥ ∆		SOUND		, PO4-P	TDTA L-P	NO <sub>2</sub> -N	NO <sub>3</sub> -N	\$104-5		s
	HR 1/10	NO.	TYPE	GEPTH (m)	τ ℃	s ·/.	SIGMA-	ANDM	ALY-3107	DYN.	M.	VELOCITY	O2 ml/	μg - qt/l	yg - at/1	ا/10 - ور	μg - οl/l	yg - 01/		c
	201		OBS !	0025	-0171	32730	2636	1		1	- !	14386	1						1	
			STD	0030 0050	-0173 -0178	3272 3272	2635 2635		6831 6827			14385 14386								
	201		OBS STD	0050 0075	-0178 -0172	32717 3282	2635 2643	001	6050			14386 14395								
	201		OBS STD	0075 0100	-0172 -0151	32817 3299	2643 2656		4747			14395								
	201		OBS	0100	-0151 -0091	32991 3371	2656 2713		9420			14411 14454								
	201		STD	0150 0150	-0048	3422 34216	2752		5729			14485								
	201		OBS STD	0200	-0048 -0013	3457	2752	000	3175			14485								
	201 201		OBS OBS	0200 0235	-0013 -0006	34573 34609	2779 2781					14514 14524								
REFERENCE	SHIP			GITUDE E	M/ RSDEN	STATION TIA			RIGINAT	OR*S	DEF		1	WAVE	WEA-	CLOUD		Т	NODC	
CODE NO.	CODE	LATITU	1/10	1/10	10° 1°	(GMT)	1/10 YEA1	R CRUISE NO.		TION	BOTT	. I a	""	SERVATIONS HGT PER SE	CODE	TYPE AMT			TATION	
311506	-	7916	ON 07	2480W	260 92 (			9 KB2	030	· °C	02:	. 1				4			0030	
					COLOR	TRANS. DIR.	SPEED M	ETER C	DLB E	WET CO	DE DEP		PECIAL EVATIONS							
						00	500 0	81 -1		8							1		1	$\overline{}$
	MESSENGR TIME OF NR 1/10	CAST NO.	CARD TYPE	DEPTN (m)	1 °C	s */	SIGMA-T	SPECIFIC	VDLUME	₹ ∆ 07N, x 10	M. ,	VELOCITY	O2 ml/l	PO <sub>4</sub> =P μg = αI/I	ΤΟΤΑ L—P μg - οι/Ι	NO2-N NG - 01/1	NO3-N 1/to - gu	\$1 O4-\$ yg - at/		S C
	042		OBS	0025	-0170	32721	2635				$\top$	1.206								71
	042		STD	0030	-0172	3272 3271	2635		6841		1	4386								
	042		OBS	0050 0050	-0175 -0175 -0170	2634		6887		1	4388									
	042		OBS	0075 0075	2643 2643 2657		6024		1	4396										
	042		OBS 0100 -0153 32999 2						4680		1	4410								
		STD 0150 -0048 3422 2752 0						9340 5668			14453 14485									
	042 OBS 0150 -0048 34224 2752 STD 0200 -0011 3458 2779 0003155					3155			4485											
	042 042		OBS OBS	0200 0235	-0011 -0008	34577 34686	2779 2788				1	4515 4524								

CTRY	ID. NO.	SHIP	LATITU		LONGITUDE	50 50	2SDEH UARE	(	DN TI	Y	EAR		OTATA	v .	DEPTH TO BOTTOM	MAX, DEPTH OF	OBZ	WAVE ERVATIO		WEA- THER CODE	CLOUD		ST	ATION UMBER	
1000	NO.	_		1/10	1/10	10*	1"	WOLD	AY H	IK.1/10		NO.	NUMBE	×		S'MPL'S	OR.	HGT PER	SEA	10001	TYPE AM	7	- 17	OWIDER	
31	1506		7916	ON	072480W	260	92	05 1	5 1	122 19	969	KB2 03	1	- 10	0237						4			0031	
							WA	TER	٧	AIND	BARO	A IR TE	MP. °C	105	ND.	SPEC									
							COLDR		DIR	SPEED	METER		WET		OBS. DEPTNS	ORSERVA									
							CODE	tmj		PORCE	(mbs1	RULR	BULI		5000										
									03	505	098	880-		8	07										
		MESSENG TIME	CAST	CAR		m1	1 °C	s	٠/	SIGMA	1-T	SPECIFIC VOLU		≨ ∆ D DYN. M.		DNC	02 ml/3	PO4-	Р 1	TOTAL-P	ND2-N	ND3-N	\$1 O4-\$i	pΝ	s
		HR 1/10		TYP	E					3.0		ANOMALY-X	10"	x 10 <sup>3</sup>	VELO	DCITY		18 . u	1/1	µg - 01∕1	μg − σt/l	µg + o1/1	yg - at/1	PΩ	č
																									П
		12	2 (	085	002	5 '-(	0178	327	22	263	5 '				14:	382		'	'	,		'			, ,
			_	51		) -(	0178	327	2	263	5	001679	8		143	383									
				51	0 0050	) –(	178	327	3	2635	5	001676	6		14:	386									
		12	2	089	0050	) -(	178	327	25	263	5				14:	386									
				S1	D 007	5 -(	173	328	1	264	2	001608	7		143	394									
		12	2	085	007	5 ~(	173	328	12	264	2				143	394									
				S1	D 0100	) –(	155	330		2660	0	001438	3			410									
		12.	2	085			155	330		2660						410									
				ST			0097	337		2713		000939				451									
				51			0053	341		2750		000591	9			482									
		12	2	085			053	341		2750						482									
				ST			0011	345		2780		000302	6			515									
		12		085			0011	345		2780						515									
		12.	2	085	023	5 - (	0007	346	23	2783	3				14	523									

	, ,																								
REFERENCE	SHIP	LATITU	.	1011	SITUDE ES	47 RS		STAT	IDN TI		WF A D	DRIGIN			DEPTH	DEPT		WAVE		WEA-	CLOUD			NDDC	
CTRY ID.	COGE	. LAIIIU	- 1	LOHO	1/10						YEAR		NUMRE		FO SDTTD8	, OF	_ On	SERVATIO		THER	CDDES		S N	UMRER	
	+ +		1/10		1718	10*	10	MD E	H	X,1/10		10.	NUMRE	*		" S'MPI	r's Doc	HGT PER	SEA	1000	TYPE AM	1	-   "	DIVINER	
311506	d 4	7916	on l	072	480W	260	92 (		5 1	91 1	969	KB2 03	2		0237	7				72	X 8			0032	
							WAT	ER	٧	MD	RARC	AR TE	MP. °C	_ vis	ND.		ECIAL								
							COLOR	TRANS.	DIR	SPEED	METE		WET	COOR	OBS. DEPTHS	Daces	VATIONS								
							CODE			FORCE	(mbs	1 RULR	RULI	_		1									
							i		08	508	098	8 -090		5	27	1									
	MESSENGR	CAST	CAR	n l						T		SPECIFIC VOLU		₹ Δ 0 DYN. M.	7.0	UND		PO <sub>4</sub> -		OTAL-P	NO N				15
	TIME	NO.	TYP		DEPTH (m)	[ ]	°C	8	٠/٠.	SIGM	A-T	AHOMALY-XI	07	N. MYD. 7 10 <sup>3</sup>	VEL	OCITY	D <sub>2</sub> ml/	J 104-0		#8 - at/1	NO2-N ug = al/l	NO3-N pg - o1/I	SI Q4~Si yg + at/l	pН	c
	HR 1/10			-		-		-		+				A 10	+-			+	+						
	1			- 1				1		I	- 1				1		-							l	
			ST		0010		153	327		263	6	001676	8			392									
	191		085		0010		153	327		263						392									
			ST		0020		165	327		263		001693	3			387									
	191		085		0020		165	327		263						387									
			ST		0030		176	327	_	263		001684	8			384									
	191		085		0030		176	327	17	263	5				14	384									
	191		085		0040	-0		327		263	-				14	383									
			ST		0050		177	327		263		001679	1			387									
	191		085		0050		177	327		263					14	387									
	191		085		0060		176	327		263	4				14	389									
	191		085		0070		173	327		264						393									
	208		085		0071		172	327		264						394									
			ST		0075	-0		328		264	-	001603	0			395									
	208		085		0800		169	328		264						397									
	208		085		0090		165	329		265						402									
			51		0100		163	330		265		001462	4			406									
	208		085		0100		163	330		265						406									
	208		085		0110		124	333	-	268						430									
	208		085		0120		123	335		270						436									
			ST		0125		100	338	_	272		000846	9			451									
	208		085		0130		95	338		272						454									
	215		085		0131		96	338		272					_	454									
	215	1	085		0140		080	340		273			_			465									
	21.5		ST		0150		)56	342		275		000554	U			481									
	215		085	-	0150		)56	342		275						481									
	215		085		0160		28	344		277						499									
	215		085		0170		129	344		277						501									
	215		085		0180		22	345		277	_					506									
	215		085	-	0190		18	345		277						510									
	234	+	085		0191		018	345		277		000217	^			510									
	20.		ST		0200	-00		345		277		000317	g			515									
	234		085		0200	-00		345		277						515									
	234		085		0210	-00		346		278						517									
	234		085		0220		007	346		278						521									
	234		085		0230		005	346		278						524									
	234		085	•	0240	-00	005	346	18	278	2				14	525									
																	-								

																					Ţ				
CTI	FERENCE NO.	SHIP	LATITU		DE SOUTE	SOU			ON TIA	١ ا	YEAB	CRUISE NO.	STA	TION MBER	$\neg$	DEPTH TO TOTTOM	OEPTH OF S'MPL'S		WAVE SERVATIONS HGT PER S	COOL	CLOUD COOES	}	[ S1	ATION UMBER	
-	11506		7916	0N 07	1/10 = 2480W	260	92	05		99 1	969	K82	033		o	237	,,,,,,,	Disc	NGI TEK 3	72	x 8			0033	
							COLOR COOE	_	1-	SPEED OR FORCE	METEL (mbs)	DR.			VIS.	NO. ORS. DEPTHS	SPEC OBSERV	A TIONS							
							0000		07	502	119	_	$\rightarrow$		7	07									
		MESSENGR TIME	약 NO.	CARO TYPE	DEPTH (m)	Т	°C	S	٠/	SIGMA	1-A	SPECIFIC N	VOLUME Y-X107	∑ A	△ 0 v. м. 10³		OCITY	02 ml/l	PO4-P pg - a1/1	101A L-P µg = a1/I	NO2-N pg - at/l	NO3-N yg - at/l	SI O4-Si pg - at/I	рН	200
		HR 1/10				+-								$\top$					†						#
		199	)	085 STD	0025 0030	-0	172 174	327	71	263 263	4	0016				14	385 385								
		199	)	STD 085	0050 0050		176 176	327		263 263		0016				14	387 387								
		199	)	STD OBS	0075 0075	-0	169 169	328	351	264 264	5	0015				14	397 397								
		199	)	STD 085	0100	-0	159 159	330	)47	266 266	1	0014				14	408 408								
				STD STD	0125 0150	-0	101 058	342	2.2	271 275	2	0009				14	449 480								
		199	)	085 5TD	0150 0200		058 014	342		275 278		0003	109				480 514								
		199		085 085	0200 0235		014 008	345		278 278							514 523								
RE	FERENCE				# H	4/2	SOEN	STAT	ION TIA	AE		OR	GINAT	OR'S	T	DEPTH	MAX	1	WAVE	WEA	CLOUG	1		400C	
COL	ID.	COOE	LATITU	DE LO1	· Y/10	10"	ARE	(	GMT)	1	YEAR	CRUISE NO.		TION		то	DEPTH OF S'MPL'S	OB:	HGT PER S	0000	TYPE AM		5	UMBER	
3	11506		7916	ON   07	2480W	260	92 (			04 1	969	A 10	034 R TEMP.	. °c		)237 NO.				72	x   7		1	0034	
							COLOR	TRANS.	OIR.	SPEED OR FORCE	M ETEI (mbs)	R DR	Y V	W E T BUL G	CODE VIZ	OBS. OEPTHS	OBSERV	ATIDNS							
		MESSENGA			1	1					166			-	A D	07									
			I NO.	TYPE	OEPTH (m)	T	°C	S	٠/٠.	SIGM	A-T	ANGMAL	VOLUME .Y=X18?	DY X	∆ D N. M. 10 <sup>3</sup>		OCITY	02 ml/l	PO4-P µg = at/l	TOTAL-P p - at/l	NO2-N µ9 - 01/1	NO3-N NO3-N	SI O4-Si µg + al/l	рН	o c
		004		085	0025	-0	175	326	91	263	2					14:	383		1	1					
				ST0 ST0	0030		175 176	326		263 263		0017 0017					384 387								
		004	•	OBS STO	0050 0075		176 171	317		255 263		0017	228			14	393								
		004	•	085 STD	0075 0100		171 159	326		263 268		0012	049				393 412								
		004	•	085 STD	0100 0125		159 096	260 338		209 272		0008	178			14	454								
		004		ST0 085	0150 0150		051 051	342		275 275		0005	425				484 484								
		004	,	STD OBS	0200		013 013	346		278 278		0002	947			14	515 515								
		004		085	0235	-0	007	346	554	278	5					14	524								
C1	FERENCE RY 10.	SHIP	LATITU	OE LO	NGITUDE BOUTON		SOEN	STAT	ION THE		YEAR	CRUISE	UGINAT STA	OR'S	-	DEPTH TO	MAX. DEPTH OF	OB	WAVE SERVATIONS		CODES		5	OOC IATION	
co	11506		7916	1/10 ON 0.7	17/10 5 Z 2480W	10° 260			16 0		969	NO.	035	MBER	$\rightarrow$	237	S'MPL'S	DIR	HGT PER S	EA COOI	TYPE AM	π		0035	
			.,,			, = 0 0	COLOR	TER	W	SPEED	BARO	All	R TEMP.			NO.	SPEC	CIAL		'	,	1	'	0032	
							CODE	(m)		FORCE 515	186				9	ORS. DEPTHS									
		MESSENGI TIME	CAST OF NO.	CARO TYPE	OEPTH (m)	1	°c	5	٠/	SIGM		SPECIFIC	Valume	OYi	Δ O.N. M.	SOI	UNO	O2 ml/l	PO4-P	TOTA L-F		NO3-N		рН	s
		NR 1/10												X	103	1	OCIII		hā - a4/[	1\10 + gu	ا/۱۵ - ور	pg - 01/1	yg + a1/I		c
		04]	l	085 STD	0025 0030		177 177	326		262 263		0017	207				382 <sup>'</sup> 383			,		'			,
		04]	l	STD 085	0050 0050	-0	178 178	32	77	263 263	9	0016				14	387 387								
		041		STD 085	0075 0075	-0	171 171	328	39	264 264	8	0015	515			14	396 396								
		04]	l	STD 08S	0100 0100	-0	163 163	330	00	265 265	7	0014	662			14	406 406								
				STD STD	0125 0150	-0	098 051	334	+3	269 275	0	0011 0005				14	446 483								
		041	l	OBS STD	0150 0200	-0	051 013	34		275							483								
		041		085 085	0200 0235		013 008	331 340		270 273															

REFERENCE	SHIP	LATITUO	35	LONGITUDE	SCTR C	A LSI	DEN I	STATION THE	WE	YEAR	CRUISE	RIGINA	TOR'S		DEPTH	MAX		WAVE RVATIONS	WEA- THER	CLOUD		1 17	ODC	
CODE NO.	COOE	*	1/10	1/10	D N	10"		MO   DAY HI	,1/10		NO.	NI	JMBER		BOTTOM	OF S'MPL	'S OR F	IGT PER SEA	CODE	TYPE AMI		_	JMBER	
311506		79160	) I NC	072480W		260 <u> </u> ]	92 WA1		INO	1969 BAR	1 0	036		VIE	NO.	SPI	ECIAL	1 1	1	-  0	1	(	0036	
							COOE	TRANS. OIR.	SPEEC OR FORC	MET	ER C	JRY JLB	W E T BULB	CODE	OBS. DEPTHS	OBSER	VATIONS							
,		— — т				[		06	S01	22	7 -1	10		9	07									
	MESSENGR TIME o	CAST NO.	CARD	DEPTH (	m ĵ	т	℃	5 %.	SIG	MA-T	SPECIFIC	VOLUA ALY-X19	2 2	A O ∆ O NYN. M		CITY	O <sub>2</sub> ml/l	PO4-P µg = at/l	TOTAL-P pg = ql/l	NO2~N yg = at/l	NO3~N µg - a1/1	\$1 O4-\$1 pg - a1/1	pН	S C
	HR 1/10												+-		+									Ħ
	125	•	08S	0025		-01 -01		32685 3270		32 33	0016	6975				3 8 2 3 8 3								
	105		ST	0050	)	-01	.77	3275 32752	26	37 37	001				14:	387 387								
	125		OBS STI		5	-01 -01	.73	3275	26	38	001	6532			14	393								
	125		08S	0075		-01 -01		32754 3341		38 90	001	1507	,			393 412								
	125		OBS STI	0100		-01 -01		3180P 3390		60P 28	000	7934			14	452								
	125		STO			-00 -00		3422 34220		52 52	000	5667	,			482 482								
			ST	0200	)	-00	16	3438 34377	27	63	0004	4649			14	510 510								
	125 125		OBS OBS	0200 0235		-00		3401P		33P					14.	,,,								
REFERENCE						147.350	OEN	STATION TI	MF			ORIGIN A	TOR'S		OEPTH	MAX		WAVE	WEA-	Ctouc	T	i .	100C	
CTRY IO.	COOE	LATITU	DE 1/10	LONGITUDE 1/10	NDC	5QU/	ARE	MO   DAY H		YEAR	CRUISE NO.	51	ATION		BOTTOM	OF S'MPL	OBSE	RVATIONS	THER	TIPE AM	i	51	UMBER	
311506		7916	ON I	072480W		260	92	05 16 1	80	1969					0237					X 5			0037	
							COLOR		SPEEC	MES	ER C	ORY DLB	WET BULB	COOI	NO. OBS. DEPTHS	SP OBSER	ECIAL VATIONS							
						ŀ			502	-	-	40	2002	8	07									
	MESSENGR TIME O	CAST NO.	CARC		m1	т	τ	5 %.	SIG	MA-T	SPECIFIC	VOLUA	AE C	E A D	SOI	DOLLY	O3 ml/1	PO4-P µg = at/l	TOTAL-P	NO <sub>2</sub> -N μg - α1/I	NO3-N	\$1 O4-\$i	рН	S
	HR 1/10							-	-				+	X 10 <sup>3</sup>	+			) y = 0.77	py - dry	pg - 051	µg = 01/1	pg - 001		H
,	180	' '	OBS STI	0025 0030		-01 -01		32735 3274		36	001	6708	,			383 384	ı	1 1					'	
	100		ST	D 0050	)	-01	178	3274	26	36		6673			14	387								
	180		OBS STI		5	-01 -01	172	32737 3283	26	36	001	5956	3		14	387 395								
	180		OBS	0075 0100		-01 -01		32829 3308		64	001	4040	)			395 408								
	180		OBS STI	0100 0125		-01 -01		33080 3358		03	001	0356				408 444								
	100		ST		)	-00	)65	3391 33905	27	27		8025				473 473								
	180		OBS	0 0200	)	-00	15	3405	27	37	000	7111			14	506								
	180 180		OBS OBS	0200		-00		34054 34124		37 42						506 516								
REFERENCE					1 -	T				1		000000	4 YO 081		,	MA	¥				_			
CTRY ID.	CODE	LATITU	1/10	LONGITUDE '1/10	DAIFT	50U	ARE	STATION T IGMTI		YEAR			TATIO	N	DEPTH TO BOTTON	DEPT	H OBS	WAVE ERVATIONS		CODE	5	2	NODC TATION TUMBER	
311506	,	7916		072480W	1	260					KB2	1			0237		L S DIK	HGI PEX SI	LA	8	_		0038	
							COLOR	TRANS OUR	SPEE		TER	ORY DE	WET	VIS	NO. OBS. DEPTHS	OBSE	PECIAL RVATIONS							
							CODE	tm1 29	SOA	CE (m	_	20	BULI	8	0.7									
	MESSENGR TIME HR 1/10	CAST	CAR		(m)	T	₾	5 *4.	Т	GMA-T	SPECIFIC	C VOLU	ME	₹ Δ C DYN. A x 10 <sup>3</sup>	-	מאט	O <sub>2</sub> ml/l	PO <sub>4</sub> -P	TOTAL-F	NO <sub>2</sub> N	NO3-N	5104-5	- 11	S
	HR 1/10	1	TYPE			-		-	-		ANDA	ALY-XI		x 103	VEL	OCITY	07	μg - αt/1	µg + 01/1	pg = 01/1	yg - 01/1	νg - αl/l	pН	c
	201	1	OBS				177	32708		534	I		1			382		Ī	1	1	I	I		
	201 OBS 0025 STO 0030 STO 0050					-0	177 176	3272 3278	26	535 540		632				384 388								
	STO 0050 201 0BS 0050 STO 0075 201 0BS 0075 STD 0100						176 170	3233P 3286		03P	001	5740	0		14	396								
							170 156	32858 3311	26	646		3790			14	396 411								
	201		OBS	010	0	-0	156	33114	26	666					14	411								
			ST	D 015	0	-00	102 060	3338 3365	2.	86 707		999				444 471								
	201		OBS ST				060 015	3308P 3422		61P 751	000	5841	В		14	508								
	201 201		08S	020	0	-00	015	3357P 34643	26	598P						524								
	201		000	020		0		5.045	2,						1 4									

REFERENCE CTRY 10.	SHIP	LATITUO	E LON	CULNOE SOUNDS	*A/ RSDEN SQUARE	STATION TIA		EAD .		TATION	-	DEPTH TO IOTTOM	MAX. OEPTH OF	OBSE	WAVE RVATIONS	WEA- THER CODE	CLOUG		AT2	DOC TION MBER	
311506		79160	1/10 N 0.72	1/10 =		05 17 0		969	NO. 1	OUMBER 9	$\rightarrow$	237	S'MPL'S	DIR.	GT PER SE	.	TYPE AMT			039	
1 311300	'	77100	M 1072	. 400 #	COLOR	n W	NO	BARO- METER	AIR TE		VIS.	NO. .280	SPEC	TAL							
					CODE	tm1 Usc	FOICE SO4	(mbe) 220	-068	BULB	8	OEPTHS									
	MESSENGE	CAST	CARD		, ,	28	SIGMA		SPECIFIC VOLU	ME &	Δ Ω. γΝ. Μ.	SOL		O2 m1/1	PO 4-P	TOTAL-P	NO <sub>2</sub> -N	NO3-N	SI O4-Si	рн С	
	HR 1/10	or NO.	TYPE	OEPTH (m)	7 %	3 %.	SIGMA	N-1	ANDMALTX1	•'	x 10 <sup>3</sup>	VELO	DCITY		ا/٥١ - وبر	μg • e1/1	yg - at/1	yg - at/l	µg - al/!	, i	1
	039		085	0025	-0178	32644	262 <sup>.</sup>	9		1		143	381		[	ı	'		'	'	1
	02,		STD STD	0030 0050	-0178 -0179	3266 3275	263 263		001728				382 386								
	039	)	obs	0050	-0179	32747	263	7				14	386								
	039	,	STD OBS	00 <b>7</b> 5 0075	-0173 -0173	3287 32866	264 264		001567	2		143	395 395								
	039	)	STD OBS	0100	-0164 -0164	3305 33045	266 266		001429	9			406 406								
	03,		STD	0125 0150	-0103 -0057	3306 3332	266 268	0	001434				439 468								
	039	)	STO OBS	0150	-0057	33318	268	0				14	468 514								
	039	)	STD OBS	0200 0200	-0013 -0013	3455 34552	277		000333	4			514								
	039	)	085	0235	-0008																
REFERENCE	SHIP			- E	M/ RSOEN SOUARE	STATION TI		MF . B		ATOR'S		DEPTH	MAX. DEPTH		WAVE ERVATIONS	WEA-	CLOUD		N	00С	
CDDE NO.	COOE	LATITUT	1/10	1\10 E		MO OAY HE		YEAR		STATION NUMBER		TO	S'MPL"		HGT PER SI	A CODE	TYPE AM		NI NI	ATION	
311506		79160	ON 072	2480W	260 92 WAI		22 1 INO	969	KB2 04	0 MP. T	<del>   </del>	0237				-	7		0	040	
					COLOR	TRANS. OIR.	SPEED	METE (mbs	R DRY	WET	CODE	NO. OBS. DEPTHS	OBSERV	CTAL ATIONS							
					10001		504	230			+	07									
	MESSENGE TIME	CAST	CARD TYPE	DEPTH (m)	1 %	5 %.	SIGM	A-T	SPECIFIC VOLU	JME 8	A O		OCITY	02 ml/l	PO4-P	TOTAL-P	NO2-N	NO <sub>3</sub> -N	SI O4-Si	рН	S
	HR 1/10	1.0.	-172						7,7,0,1,7,0,1	+	x 10 <sup>3</sup>	VIC	OCIII		) - ui/i	ا⁄اه - وبر	yg - at/l	yg - at/l	ug - a1/1	- 1	
	122	5 1	085	0025	-0176	32345	260			,			378		ı	١,			'	'	ì
			STD STD	0030 0050	-0176 -0177	3241 3264	261 262		001920				379 386								
	122	2	08S STD	0050 0075	-0177 -0171	32636 3281	262 264		001614	5			386 395								
	122	2	085	0075	-0171	32805 3304	264	2				14	395								
	122	2	STD OBS	0100 0100	-0156 -0156	33041	266 266		001435			14	410 410								
			STD STD	0125 0150	-0094 -0050	3375 3425	271 275		000910				453 484								
	122	2	OBS STD	0150 0200	-0050 -0015	34245 3459	275 278		000305	8			484 513								
	122		OBS	0200	-0015	34587	278	0	000000			14	513								
	122	2	OBS	0235	-0009	34652	278	5				14	523								
REFERENCE CTRY 10.	SHIP	LATITU	OE LON	AGITUOF PA	M/ RSDEH SQUARE	STATION TI		YEAR		NATOR'S		DEPTH	UEFIN	OBS	WAVE ERVATIONS	WEA- THER	CLOUD		N ST	ODC	
CDDE NO.	COOE	•	1/10	1/10	10" 1"	MO DAY H	R,1/10			NUMBEL		BOTTON	S'MPL'	S DIR.	HGT PER S	COOE	TYPE AM		NI	JANGER	
311506	,1 1	7916	ON 107	2480W	260 92 WA		98 1	969 BARC	KB2 04	MP. ℃		0237 NO.		CIAL		1	1	1	(	0041	
					COLOR	TEANS. DIR.	SPEED DE FDECE	M ETE (mbs	DRY	W ET OULB	CDD	OBS.	OBSERV	ATIONS							
				,	,	03	508	22	7 -050	Ц	8	07	LŢ,								П
	*******	CAST NO.	CARO TYPE	OEPTH (m)	1.0	s */	SIGM	T-A	SPECIFIC VOL	UME 197	E △ □ 27N. M 10 <sup>3</sup>	. VEL	OCITY	O 2 ml/l	PO4-P yg = e1/I	701AL-P		NO3-N yg - at/l	SI O4-Si µg - a1/I	рН	S
	HR 1/10				1	1	1			+							-				1
	19	9	OBS STD	0025	-0176 -0176	32753 3275	263 263		001657	19			384 384								
			STD	0050	-0177	3275	263	37	001659			14	387								
	19		OBS STD	0050 0075	-0177 -0171	32747 3287	263	7	001565	3		14	387								
	19		085 085	0075 0099	-0171 -0153	32869 33098	264 266						396 412								
			S10 S10	0100 0125	-0151 -0102	3312 3371	266	7	001375			14	413								
	19	9	OBS	0149	-0064	34138	274	6				14	476								
	19	9	ST0 085	0150 0199	-0063 -0015	3415 34592	274	31	000616			14	477 513								
	19	9	STD OBS	0200 0235	-0014 -0008	3460 34651	278		000296	4			514								

EREN	CE				- =		SDEN		NIT NO			C	RIGINA	TOR'S		DEPTH	MAX		WAVE		WEA-	CLOUD			NODC	
11		SNIP	LATITU	DE L	ONGITUDE S		JARE		ITM		AR	CRUISE		ATION		TO	OF	UN.	ERVA TI		THER	COOES		5	TATION UMBER	
N	0.			1/10	1/10 =	10°	1°	MO D	AY HR.	1/10		NO.	N	JABER			S'MPL	2 OH	HGT PE	SEA	CODE	TYPE AM		- "	OMOEK	
15	06		7916	an lo	72480W	260	92	05 1	7 20	38 19	69	KB2	042			237						1 1			0042	
	• • •	•	, ,				WAT			NO	BAR	2= A	IR TEM	P. °C	TT	NO.	6.00	CIAL								
							COLOR		DIR.	SPEED BO	METE	ER O	DRY	WET	SOOE	OBS. DEPTHS	Caseo!	ATIONS								
							COOE	tm)		FORCE	(mb)	1 R1	ULB	RULR	1	DEFT IN S	<b> </b>									
								1	03 3	505	22	7 -00	60		8	27	}									
	ſ,	MESSENGR	CAST	CARD	T	$\overline{1}$						SPECIFIC	VDLUM	٤ ٤	A D	1 ,0	QNU		PO4		OTAL-P	NO2-N	NO3-N	SI O4-Si		5
	- 1	TIME	I NO.	TYPE	OEPTH (m)	1	°C	2 .	'4.	SIGMA	-1		ALT-X10	, D.	YN, M. R 10 <sup>3</sup>		OCITY	O2 mL/1	98 -		#g - 01/1	νg - αl/l	nd - at/1	μg - οι/l	pН	5
	ľ	4R 1/10			<del></del>	+-		-			_					+			+	+						++
			1			1		1	_ ]					- 1		1.	!		1	- 1		ŧ :		l	l	U
				STD	0010		178	327		2635		001	6854				380									
		208		OBS	0010		17B	327		2635							380									
				STD	0020		17B	327		2639		0016	6476				382									
		208		OBS	0020		178	327		2639						_	382									
				STD	0030		179	327		2635		0016	6835				382									
		208		OBS	0030		179	327		2635							382									
		208		obs	0040		179	327		2634							384									
				STD	0050		176	327		2634		0016	6862				387									
		208		OBS	0050		176	327		2634							387									
		208		OBS	0060		176	327		2635							389									
		208		OBS	0070		174	328		2643							393									
		216		OBS	0071		169	328		2647		0016	5257				396									
				STO	0075		165	329		2650		001:	5352				399									
		216		OBS	0080		162	329		2653							402 403									
		216		OBS	0090		166	330	-	2658		001	2000				418									
				STD	0100		141	331		2665		001	3900				418									
		216		OBS	0100		141	331		2665 2680							424									
		216		085 085	0110 0120		136 109	335		2697							441									
		216		STD	0125		106	336		2708		0000	9841				446									
		216			0130		102	337		2720		000	7041				450									
		216		OBS OBS	0130		097	338		2727							454									
				OBS	0140		082	340		2738							465									
		224		STD	0150		050	342		2755		000	5377				485									
		224		085	0150		050	342		2755		000.	-511				485									
		224		OBS	0160		028	344		2767							498									
		224		OBS	0170		027	344		2773							502									
		224		OBS	0180		024	345		2774							505									
		224		085	0190		024	345		2774							506									
		243		OBS	0191		026	345		2775							506									
		243		STD	0200		023	345		2776		000	3419				509									
		243		OBS	0200		023	345		2776			,				509									
		243		OBS	0210		022	345		2777							511									
		243		085	0220		016	345		2778							516									
		243		OBS	0230		008	345		2780							522									
		243		OBS	0240		010	346		2782							523									
				~ ~ ~ ~	02.70	-	- 4 -																			

EFER	ENCE	SMIP			- E	M/R	SDEN	STAT	ION T			ORIG	INATOR	.2	DEPTH	DEPTH		WAVE	 WEA-		oup			ODC	
TRY	NO.	CODE	LATITU	DE LO	NGITUDE B	\$00 10°	1°	MOIG	GMTI DAY H		YEAR	CRUISE NO.	MUM		ROTTON	OF	0.43	HGT PER	 CODE	EANE	OES			UMRER	
31	1506		7916	ON 07	2480W	260	92	05	18 0	11 1	969	KB2 0	43		0237						1			0043	
-			. ,				WA			UND	BARO	A ID	TEMP. 1	VIS	T NO		CIAL								
							COLOR	TRANS.	OIR.	SPEEO OR SPEEO	(mbs)		BU	I COC			ZHORS								
									02	507	210	-059		8	07										
		MESSENGE TIME O	CAST NO.	C ARO TYPE	DEPTH (m)	Т	Ψ.	2	٠/	SIGM	A-1	SPECIFIC VO		₹ △ C DYN, A R 103	A.   100	OCITY	O2 ml/1	PO4-	DTAL-P pg - at/l	NO <sub>2</sub>		NO3-N	\$1 O4 -\$i yg - at/1		
								1													$\neg$				Ī
		011		OBS	0025		178		753	263						383									
				STD	0030		178	32		263		00165				383									
				STD	0050		179	32		263		00164	79			386									
		011		085	0050		179	32		263						386									
				STD	0075		172	329		265		00152	98			396									
		011		OBS	0075		172	329		265						396									
				STD	0100		160	331		266		00138	79			40B									
		011		OBS	0100		160	331		266						408									
				STD	0125		108	33		272		000B7				447									
				STD	0150		067	342		275		00053	01			477									
		011		OBS	0150		067	342		275						477									
				STD	0200		022	345		277		00032	42			510									
		011		OBS	0200		022	345		277						510									
		011		OBS	0235	-0	010	346	36	278	4				14	522									

REFERENCE CTRY 10.	SHIP	LATITU	DE LON	GITUDE EDON	M/ RSOEN SOUARE	STATION TIME	AE YEAR	CRUISE	NATOR'S		OEPTH TO BOTTOM	MAX. GEPTH OF	OBSE	WAVE RVATIONS	WEA- THER COOE	CLOUG		OON NTAT2	NC
CODE NO.	COOE	701/	1/10	1/10		05 18 0	39 1969	1	NU MBER	$\dashv$	0237	S'MPL'S	DIR.	HGT PER SEA	0000	TYPE AMT		004	-
1311506	1 1	7916	UN 107	2480W1 1.	WAT	ER WI	SPEED ME	RO- AIR TE	MP. °C	VIS	NO. OBS.	SPEC	IAL						
					3000	(m)	S10 19	bs) BULB	BULB	8	OEPTHS								
	MESSENGR	CAST	CARO	OEPIN (m)	r °c	5 %.	SIGMA-T	SPECIFIC VOL	UME S	A 0 N. W	sou		D2 ml/l		TOTAL-P	NO2-N	NO3-N	SI O <sub>4</sub> -Si	PH C
	TIME MR 1/10	및 NO.	TYPE	Ogrin on			3,0,,,,,,	ANDMALY-J	107	x 10 <sup>3</sup>	, AETO	DCITY		1/10 - Qu	µg = 01/1	µg − ot/I	1\10 - gu	µg - at/l	С
	039	!	08s	0025	-0181	32733	2636	}	1		143			1 1	'	1	1	1	- ' '
			STD STD	0030 0050	-0181 -0181	3274 3276	2636 2638	001667				382 385							
	039	9	OBS STD	0050 0075	-0181 -0170	32756 3292	2638 2651	001524	8			385 397							
	039	9	OBS	0075 0100	-0170 -0155	32922 3313	2651 2667	001370	11			397 411							
	039	9	STD OBS	0100	-0155	33126	2667	000904			144	411 445							
			STD STD	0125 0150	-0111 -0075	3375 3419	2717 2751	000579			144	472							
	039	9	OBS STD	0150 0200	-0075 -0025	34192 3453	2751 2776	000340	9		145	472 508							
	039		085 085	0200 0235	-0025 -0015	34534 34603	2776 2781					508 519							
	0,5	,	0.00																
REFERENCE	1 1				W/ RSOEN	STATION TH	ME T	T ORIGI	NATOR'S		DEPTH	MAX		WAVE	WEA-	CLOUD	_		
CTRY IO.	COOE	LATITO	1/10 LOI	AGITUOF POULDS	SQUARE	MO LOAY HE	YEAR		STATION		TO	OEPTH OF S'MPL'S	085	HGT PER SE	TMER	CODES		OON TAT2 MUN	ION
311506		7916	ON 07	2480W	260 92		21 196				0237					1		00	45
					COLOR		SPEED ME	TER ORY	WET BULR	VIS	NO. OBS. OEPTHS	SPEC OBSERVA							
					0000			76 -040	8000	+	07								
	MESSENG! TIME	CAST NO.	CARO TYPE	OEPTH (m)	T °C	s ·4.	SIGMA-T	SPECIFIC VOI	.UME 2	E A D	SOI VEL	UNO	O2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	SI O4-Si	pN C
	HR 1/10	1								x 10 <sup>3</sup>	766	ociii	-	μg - at/t	₩Q - at/1	h8 - at/1	µg − ot/I	yo - at/1	- C
	12	1	085	0025	-0175	32756	2638	00365	. ,			384		, ,			'	'	
			STD	0030	-0175 -0177	3276 3275	2638 2638	00165			14	385 387							
	12	1	OBS STD	0050 0075	-0177 -0165	32753 3296	2638 2654	00149	5 3		14	387 400							
	12:	1	OBS STD	0075 0100	-0165 -0149	32962 3317	2654 2671	001335	56			400 415							
	12	1	OBS STD	0100 0125	-0149 -0116	33173 3377	2671 2718	00088	71			415 443							
	12	1	STD	0150 0150	-0085 -0085	3420 34195	2752 2752	000572	_		14	467 467							
			STD	0200	-0031	3455	2778	000324	+9		14	506							
	12		085 085	0200 0235	-0031 -0015	34551 34563	2778 27 <b>7</b> 8					506 519							
REFERENCE	SHIP			E	M/ RSOEN	STATION TH		ORIGI	NATOR'S		OEPTN	MAX.		WAVE	WEA-	CLOUD		NOC	ıc
CODE NO.	CODE	LATITI	1/10	1/10 E	SOUARE 10° 1°	MO DAY HE	YEAR	CRUISE NO.	STATION	•	BOTTOM	OEPTN OF S'MPL'S	DIR	HGT PER SEA	THER	TYPE AM		STATI	ON
311506		7916	ON 107	2480W	260 92		1110	9 KB2 04	EMP. °C	$\perp$	0237					1		00	46
					COLOR		SPEED BA	TER ORY	WET	COD	NO. OBS. OEPTHS.	SPEC	TIONS						
						02		66 -065		7	07								
	MESSENGI TIME MR 1/10	CAST NO.	CARO TYPE	(m) MT930	T to	2 %.	SIGMA-T	SPECIFIC VOL	UME   2	∆ 0 N . MY 10 <sup>3</sup>	SOL	OCITY	O 2 ml/t	PO4=P µg = et/I	TOTAL-P ug - ot/l		NO3-N y0 - 01/1	\$1 O4-\$1 µq - 04/1	PN C
	148 1710		1					<del>                                     </del>	$\dashv$	. 10						-			-
	178	В	OBS STD	0025 0030	-0180 -0180	32750 3275	2637 2637	001658	3.0			382 383							
	178	8	STD	0050	-0178 -0178	3276 32756	2638 2638	001652			14:	387							
			STD	0075	-0168	3296	2654	001500	00		143	387 398							
	178		OBS STD	0100	-0168 -0148	32955	2654	001335	51		144	398 415							
	178	5	OBS STD	0100 0125	-0148 -0111	33174 3375	2671 2717	000904			144	415 445							
	178	3	STD OBS	0150 0150	-0080 -0080	3416 34162	2749 2749	000600	) 2			469 469							
	178	3	STD OBS	0200 0200	-0036 -0036	3447 34471	27 <b>7</b> 2 2772	000383	33		145	502 502							
	178	В	OBS	0235	-0020	34552	2778					516							

_	FERENCE	SHIP	LATITU	0, 10	NGITUDE NOCET	MA ASDEN	STATION		YEAR	DRIGINA			DEPTH	MAX		WAVE RVATIONS	WEA- TNER	CLDUD		NODC	
COD	ID.	CODE		1/10	1/10	10" 1					UMBER	8	MOTTOM	DF S'MPL		HGT PER SEA	CODE	TYPE AMT		NUMBER	
T <sub>3</sub>	11506		7916	ON 07	2480W	260 9		199 1	969	KB2 04	<b>7</b>	. 0	237			1		0		0047	
							LOR TRANS. DIE	WIND	BARD-		WET	VIS.	NO. DBS.	SPE	CIAL						
							DE (m) DI	FORCE	(mbs)	BUTB	BULB	0001	DBS. DEPTHS	00364							
							03	515	156	-076	1 -	7	07								13
		MESSENGR TIME (	CAST NO.	C ARD TYPE	DEPTH (m)	1 10	s */	SIGM	IA-T	ANDMALY-XIE	ME DY	△ D (N. M. ( 10 <sup>3</sup>	VELO		D2 ml/1	PO4-P	107AL-P pg - ol/l	ND2-N vg - ol/1		D4-\$i g - at/t pH	C
		HR 1/10					_	-			- -	. 10									+
		199	1	08\$	0025	-018	1 32753	263	8		'		143	81		1 1	'	,	,		''
				STD	0030	-018		263		001656	2		143								
		199		OBS STD	0049 0050	-018 -018		263 263		0016492	2		143								
		199		085	0074	-016	9 32919	265	1				143								
		199		STO OBS	0075 0099	-016 -015	_	265 267		001519	1		143								
		177		STD	0100	-015		267	12	0013218			144	14							
		100		STD OBS	0125 0148	-011 -008		271 274		000881	2		144								
		199		STD	0150	-008		274		0005932	2		144								
		199		OBS	0198	-005		276 276		0004296	4		144								
		199		STD OBS	0200 0232	-005 -001				0004290			145								
CTR	FERENCE ID.	SHIP	LATITU	DE LO	NGITUDE E	SQUARE	N STATION IGM	TIME	YEAR	DRIGIN.	ATOR'S		DEPTH	MAX	. 1	WAVE ERVATIONS	WEA-	CLOUD		NODC STATION	
con	ND.	CODE	•	1/10	1/10 OZ	10"	MD DAY	HR.1/10			UMBER	'	RDITDM	S'MPL	1	HGT PER SE	0000	TYPE AMT		NUMBER	
13	11506		7916	ON 107	2480W		2 05 19	041 1	969	KB2 04		-	237					8		0048	
						<u> </u>	LOR THANS DE	WIND SPEED OR	BARD		WET	VIS, CODE	ND. DBS.		VATIONS						
						CC	DE (m)	FORCE	(mbs)	BULB	BULR	+	DEFINS								
		MESSENGR			1	<b></b>	03	5   540			.   5	5 A D	07			T T					7.
		TIME HR 1/10	NO.	CARD TYPE	DEPTH (m)	1 %	s */.	SIGN	T-A	ANDMALY-X1	ME DI	△ D YN. M. X 10 <sup>3</sup>	VETO 2DA		D2 ml/l	PO4~P µg = et/t	101A L-P ug - o1/1	NO2-N ug ~ ot/I		104-Si 19 - al/1 PH	ç
																					+
		040		085	0025	-018							143								
				STD STD	0030 0050	-018 -017		263 263		001649			143								
		040		OBS	0050	-017	9 32761	263	8 8				143	886							
		040		STD OBS	0075 0075	-016 -016		265 3 265		001513	2		143								
		0 40		STD	0100	-015	4 3311	266		001385	7		144								
		040		08\$	0100 0125	-015 -011		266 271		000963	2		144								
				STD STD	0150	-008		274		0006424			144								
		040		OBS	0150	-008 -003				000321	2		144								
		040		STD OBS	0200 0200	-003		277 277		000521	_		145								
		040		OBS	0235	-002	4 3447F	277	112												
RE	FERENCE					MARSDE	N STATION	***** T		DRIGIN	1002			MAI				1			7
COL	y ID.	CODE	LATITU		NGITUDE TOUR	SOUARE	IGM	T)	YEAR	CRUISE S	TATION	$\dashv$	DEPTH TO BOTTOM	DEPT	H OBS	WAVE ERVATIONS	THER CDDE	CLOUD		STATION NUMBER	
	11506		7916	ON 0.7	17.10		2 05 19	1	1969		UMBER		0237	2-MPL	. DBC	HGT PER SE	A   0	TYPE AMI		0049	
			.,,,				WATER	WIND	RARO	AIR TE	MP. °C	],,,,,	NO.	SP	ECIAL		1	, 10	'	1 0045	1
						CO	DDE TRANS DI	R. OR FORCE	(mbs		BULB	CODE	ORS, DEPTHS	DBSER	VATIONS						
							3	4 510	091	-070		6	07								
		MESSENGR TIME HR 1/10	CAST ND.	C ARD TYPE	DEPTH (m)	1 10	s *4.	SIGA	AA-T	SPECIFIC VOLU	ME N	Δ D YN. M.	SOU		02 ml/l	PO <sub>4</sub> =P	TOTAL-P			104-Si pH	s
		HR 1/10	-	7.1.2	<del> </del>						-	X 10 <sup>3</sup>	VEC	CIII		yg - a1/1	νg • αι/Ι	μg ≃ ot/l	μg - οt/I	rg - at/1	c
		1 124	1	08S	0025	-01B	1 32769	) 9 263	ا 39		- 1		143	381					1	ı	[]
		_		STD	0030	-018	0 3277	263	39	001643			143	883							
		124		STD OBS	0050 005 <b>0</b>	-017 -017		264 1 264		001603	0		143								
				STD	0075	-017	0 3293	269	52	001517	2		143	397							
		124	+	OBS STD	0075 0100	-017 -015				001/33	0		143								
		124	+	085	0100	-015		266 3 266		001432	,		144								
				STD	0125	-012	0 3362	270	)6	001000			144	439							
		124		STD OBS	0150 0150	-008		274 274		000676	U		144								
				STD	0200	-002	7 3452	277	75	000352	8		145	07							
		124		OBS OBS	0200 0235	-002 -001							149								
						1	3.20							- /							

CTRV 10. C	SHIP LATITU	DE LON	GITUDE JUNG	MARSUEN SQUARE	STATION TIA	YEA		UISE S	ATOR'S		OEPTH TO BOTTO	. OF	OBSE	WAVE ERVATIONS	WEA- THER CODE	CLOND		51	ODC ATION UMBER	
311506	7916	1/10 ON 07	1/10 = 2480W		05 19 1			B2 05	O	-	0237	3 MIL	S OR	HGT PER SE	1	TYPE AMT			0050	
311300				COLOR	TRANS. DIR	SPEED N	ARO-	ORY	WET	VIS.	NO. OBS. DEPTH	DECEM	CIAL /ATIONS							
				CODE	(m)	FORCE	085	-080	BULB	6	07	1								
ME	ESSENGE CAST	CARU TYPE	DEPTH (m)	1 %	5 %.	SIGMA-	T SPE	CIFIC VOLU	ME E	AD D		LOCITY	03 ml/l	PO4=P µg = a1/I	101AL-P pg = a1/1	NO2-N µg - ol/1	NO3-N ug - at/1	\$1 O4-\$i yg - at/1	pН	200
NI	R 1/10	711					+-			x 10 <sup>3</sup>										$\dagger$
•	160	OBS STO	0025 0030	-0179 -0178	32779 3278	2640 2640	0	01636	0			382								
	160	STD	0050 0050	-0175 -0175	3282 32817	2643 2643		01606				389								
	160	STD OBS	0075 0075	-0170 -0170	3293 32925	2651 2651	0	01522	5		14	397								
		STD	0100	-0157	3307 33069	2663 2663	0	01413	3		14	409								
	160	OBS STD	0100 0125	-0157 -0122	3361	2706		01007			14	438								
	160	STD OBS	0150 0150	-0089 -0089	3402 34023	2738 2738		00702			14	463								
	160	STO OBS	0200 0200	-0028 -0028	3450 34500	2774 2774	0	00365	3		14	506 506								
	160	OBS	0235	-0017	34589	2780					14	518								
CTEY IO. C	SHIP LATITU		ICITIOE NOTIFIED	MARSOEN SQUARE	STATION TIA	YEA	CBI	UISE	ATOR'S STATION	$\exists$	DEPTH TO BOTTO	OF	085	WAVE ERVATIONS	WLA- THER CODE	CLOUD			NODC FATION UMBER	
311506	7916	1/10 ON 07	1/10 = 2480W		05 19 2			B2 05	NUMBER 1		023	3 MIL	S DIR.	HGT PER SI	A COUL	TYPE A MI			0051	
311500	, 1910	010 1 011	L-400W	WAT	ER W	SPEED A	BARO- WETER		MP. °C	VIZ	NO. ORS.	SP	CIAL VATIONS		·					
				CODE	(m) OIL	FORCE	(mbs)	-090	OULB	6	0EPTH	S OHJEK	· Anons							
MI	ESSENGE CAST	CARD	OEPTH (m)	7 %	36 s ·/	S30 (	078 se	CIFIC VOLU			51	םאטס	O2 ml/l	PO <sub>4</sub> -P	TOTAL-P	NO <sub>2</sub> N	NO <sub>3</sub> -N	\$1 O4-\$i	рН	ž
	R 1/10 NO.	TYPE			' ''	3101111	, A	NOMALY—X	197	n 10 <sup>3</sup>	. VE	LOCITY	02	pg - et/l	Nto - gu	µg ~ al/l	µg - al/l	yg - al/l		ď
'	205	OBS	0025	-0179	32746	2637	١.		1			4382		i		' '			1	11
		STD STD	0030 0050	-0178 -0176	3275 3275	2637 2637		01662 01660			14	4383								
	205	OBS STD	0050 0075	-0176 -0168	32747 3290	2637 2649	0	01543	0		14	4388 4398								
	205 205	OBS OBS	0075 0099	-0168 -0154	32899 33048	2649 2661					_	4398 4410								
		STD STD	0100 0125	-0152 -0115	3307 3353	2663 2699		01413				4412 4440								
	205	OBS STD	0149 0150	-0085 -0084	33892 3391	2727 2728	0	00790	9			4463 4464								
	205	OBS STD	0199	-0045 -0044	34405 3441	2767 2767		00425			14	4497 4498								
	205	OBS	0234	-0016	34558	2778	Ŭ		•			4518								
	SHIP LATITU	DE LON	IGITUDE ES	MARSDEN SQUARE	STATION TIA	ME YEA	AR COL		ATORS	$\exists$	OEPTE	Uer Ir		WAVE ERVATIONS	WEA-	CLOUD			NODC	
CODE NO.		1/10	1/10 0 = =		MO DAY HE		N	10.	NOIT AT	$\dashv$	ROTTO	M S'MPL		NGT PER SI	CODE	TYPE AMI	-		UMBER	
311506	1 7916	ON   07	2480WI I	260 92 WAT	EB W	IND I	BARO-	AIR TE	2 MP. °C		NO. OBS.		CIAL	1 (	J	1	1	- 1	0052	
				COLON	(m)		METER (mbs)	AULR	RULB	CODE	OBS. DEPTH	OBSER	ATIONS							
M	ESSENGE CAST	CARO					1	-112	u. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	7	07	DNND								7.7
	TIME OF NO. R 3/10	TYPE	DEPTH (m)	2.1	s */	SIGMA-	-Y AF	NOMALY-XI	(a), O	Δ 0 γΝ, Μ, χ 10 <sup>3</sup>	VE.	LOCITY	O <sub>2</sub> mt/1	PO4-P pg - et/l	10TAL-P PR - BV	NO2-N v9 - ol/I	NO3-N P9 - ot/1	17.16 - 84	pN	ç
ı	043	OBS	0025	-0181	   32776	2639	1		1		14	382			i	١	ļ			П
		STD	0030 0050	-0181 -0179	3276 3273	2638 2636		01650 01671			14	382								
	043	OBS STD	0050 0075	-0179 -0172	32732 3283	2636 2644		01592			14	386								
	043	OBS STD	0075 0100	-0172 -0152	32834 3309	2644 2664		01400			14	395								
	043	OBS STD	0100	-0152 -0111	33087 3369	2664 2712					14	412								
	043	STD	0150	-0079	3412	2745		00950 00635			14	444								
	043	OBS STD	0150	-0079 -0040	34116	2745	01	00404	9		14	500								
	043	OBS OBS	0200 0235	-0040 -0025	34440 34525	2769 2776						514								
													,							

REFERENCE	SNIP					N3D2S	STATION T			ORIGINA	TDR'S		PTH	MAR.		WAVE	WEA	- CLOUD			NDDC	
COOR ND.	CODE	LATITUDI	/10	NGITUDE 3	N 10.	JARE 1°	MO DAY H		YEAR	CRUISE 5	TATION UMBER		10011	OF MPL*S		HGT PER S	CDD				STATION NUMBER	
-	1			.,,,,	- 10							+-		MILE 3	CIIC	AGT PER SI		TYPE AA				
31150	51 1	79160	N 07	2480W	1260	92		065 1	969				37		l	1 1	ı	X   9	l		0053	
						COLOR	I	SPEED	BARC METE			م احا	IO.	SPECI	AL							
						CODE	tm) DIR.	FORCE	(mbs		BULE	DEI	PTNS	SERVA	IIDNS							
							36	S20	10	5 -132	- 6	0	7									
	MESSENGI	1		1	1		1 150	1	120		1 - 1	<del></del>							,	T		
	IIIme	및 ND.	TYPE	DEPTH (m	1	J, J	s %.	SIGM	A~T	ANOMALY-X10		M	VELOCIT		) 2 ml/I	PD4-P pg = 01/I	101AL-P	NO2-N ug - at/l	NO3-N	SI O4-5		č
	NR 1/10	+		-	_ -		<del> </del>	<del>                                     </del>	_		- × ·	-		+			-	7.	)g - 001	70 - 0		4
	1	<u> </u>		1	١,		0.2700	1			J			_				l		i	1	11
	069	,	OBS STD	0025		180	32728 3273	263 263	-	0016748	•		1438									
			STO	0050		179	3273	263	-	0016747			1438	_								
	065	5	OBS	0050		179	32731	263	-	001011			1438									
	00.		STD	0075		170	3286	264	-	0015709	,		1439									
	069	5	OBS	0075		170	32862	264	-				1439									
			STD	0100		151	3307	266		0014110	)		1441									
	065	5	OBS	0100		151	33074	266					1441									
			STD	0125		113	3367	271		0009646			1444									
	065		STD DBS	0150		080	3410 34104	274		0006444	,		1446									
	00:	,	STO	0200		033	3446	277		0003932	,		1440									
	065	5 (	DBS	0200		033	34460	277	_	0000000			1450									
	065		085	0235		027	34509	277					1451									
														_								
BEEFERENCE	1 1				-1					03000	YOU DIF							T				
REFERENCE	SHIP	LATITUDE	LDF	AGITUDE 1		SDEN	STATION THE	ME	de . a	ORIGINA CRUISE ST		DEI	PTH N	AX.		WAVE RVATIONS	- WŁA-	CLOUD			NDDC	
REFERENCE CTRY ID. CODE NO.	SHIP		LDI	AGITUDE 17/10		SDEN	STATION TIE	ME	de . a	CRUISE ST	TDR'S ATION JMBER	DEI	PTH DE	AX.	OBSE		THER	CLOUD			NDDC STATION NUMBER	
CTRY ID.	CODE	* 1/	10	1/10	10°	SDEN IARE	STATION THE	ME 1	/E AR	CRUISE ST	ATION	DE/ T RDT	PTH DE	AX. PTN OF	OBSE	RVATIONS	THER	TYPE AM	ī		STATION	
CTRY ID.	CODE		10		50 L	SDEN IARE	STATION THE	ME 1	de . a	KB2 054	ATION JMBER	DEI T RDT	70 S'A	AAX. EPTH OF APL'S	OR. H	RVATIONS	THER	CODES			NOITATE	
CTRY ID.	CODE	* 1/	10	1/10	10°	SDEN ARE	STATION THE	ME R.1/10 45 1 SPEO OR	969 BARO METER	KB2 054	ATION JMBER P. "C V	DEF TROTT	70 DE S'A	AX. PTN OF	OR. F	RVATIONS	THER	TYPE AM			STATION	
CTRY ID.	CODE	* 1/	10	1/10	10°	SDEN ARE	STATION THE IGHT!  MD DAY HE  OS 20 1  ER W  TRANS. OIR.	R.1/10 45 1 IND SPEED OR FORCE	969 BARO METEI (mbs)	KB2 054 AIR TEM R DRT	ATION JMBER  P. 'C WET CO	DEF	PTH DE TO ME S'A	SPECIA	OR. F	RVATIONS	THER	TYPE AM			STATION	
CTRY ID.	CODE	79160	10	1/10	10°	SDEN ARE	STATION THE	ME R.1/10 45 1 SPEO OR	969 BARO METER	KB2 054 AIR TEM R DRT	P. "C WET CO	DEFT TROTT	PTH DE TO ME S'A	SPECIA	OR. F	RVATIONS	THER	TYPE AM			STATION	
CTRY ID.	MESSENGE	79160F	07	1/10	260	SDEN ARE	STATION THE IGHT!  MD DAY HE  OS 20 1  ER W  TRANS. OIR.	R.1/10 45 1 IND SPEED OR FORCE	969 BARO METEI (mbs1	KB2 054 AIR TEM DAT BULR 2 -110  SPECIFIC VOLUM	P. C WET CO	DEF T RDT	PPTH DE TOM STAN STAN STAN STAN STAN STAN STAN STAN	SPECIASERVAT	OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	T NC
CTRY ID.	MESSENGE	79160f	07	1/10 <sup>2</sup> 2480w	260	SDEN ARE	STATION TILIGMTI MD DAY HE 05 20 1 FER W TRANS OIR 02	ME R.1/10 45 1 IND SPEED OR FORCE S15	969 BARO METEI (mbs1	KB2 054  KB2 054  AIR TEM  R DRT  BULR	P. C WET CO	DEF T RDT	PPTH DE COM STAN DE ST	SPECIASERVAT	OBSE OR. F	RVATIONS HGT PER SE	THER CDDE	TYPE AM			OO54	300
CTRY ID.	MESSENGE TIME	79160F	07	1/10 <sup>2</sup> 2480w	260	SDEN ARE	STATION TILIGMTI MD DAY HE 05 20 1 FER W TRANS OIR 02	ME R.1/10 45 1 IND SPEED OR FORCE S15	969 BARO METEI (mbs1	KB2 054 AIR TEM DAT BULR 2 -110  SPECIFIC VOLUM	P. C WET CO	DEF T RDT	PPTH DE TOM STAN STAN STAN STAN STAN STAN STAN STAN	SPECIASERVAT	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	5000
CTRY ID.	MESSENGE TIME	79160#	07	1/10 <sup>2</sup> 2480w	260	SDEN ARE	STATION THE GMT!  MD DAY HI  05 20 1  ER	ME	969 BARO METEI (mbei 122	CRUISE NO. ST. NO. NO. NO. NO. NO. NO. NO. NO. NO. NO	ATION JMBER  P. C V WET CC BULR  6  E S A DYN. X 10	DEF T RDT1	PTH DE TOM STA ORS. ORS. ORS. ORS. ORS. THIS O	SPECIAL SERVAT	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	NO.0
CTRY ID.	MESSENGE TIME (HR 1/10	79160#	CARD TYPE	17/10 E 2480W DEPTH (m)	260	SDEN ARE	STATION TIL (GMT) MD DAY HI 05 20 1 ER W 18ANS OIR. 02 5 %.	ME	969  8ARO METEL (mbs)  122  A-T	CRUISE NO. ST.	ATION JMBER  P. C V WET CC BULR  6  E S A DYN. X 10	DEF T RDT	7 D. STATES ORS THIS ORS THE STATES OR STATES	SPECIAL SERVAT	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	S ICC
CTRY ID.	MESSENGE TIME HR 1/10	79160#	CARD TYPE	DEPTH (m) 0025 0030 0050	260 7 -0 -0 -0	SDEN ARE 1º 92 WAT COLOR CDDE	STATION TIL IGMTI  MD   DAY HI  0.5   20   1  TABLES   0.1R  1 TABLES   0.1R  0.2   5 %.	ME	969  8ARO METEL (mbs)  122  A-T	CRUISE NO. ST. NO. NO. NO. NO. NO. NO. NO. NO. NO. NO	ATION JMBER  P. C V WET CC BULR  6  E S A DYN. X 10	DEFI T RDTN	PTH DECOMES TO ME STAN SOUND OF STAN SOUND O	SPECIASERVAT	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	3.C.C
CTRY ID.	MESSENGE TIME (HR 1/10	79160#	CARD TYPE	DEPTH (m)  0025 0030 0050	260 -0 -0 -0 -0	SDEN ARE 1° 92 WA1 COLOR CDDE ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	STATION TIL (GMT)  MD DAY HI  DER	ME   1/10	969 BARO METEL (mbs: 122 A-T	CRUISE NO. ST. NO. NO. NO. NO. NO. NO. NO. NO. NO. NO	ATION JMBER  P. C V WET CC BULR  6  E S A DYN. X 10	DEI T ROTI	77 SOUND VELDCIT	SPECIAL SPECIA	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	S C C
CTRY ID.	MESSENGE TIME HR 1/10	79160f	CARD TYPE	DEPTH (m)  0025 0030 0050 0075	260 -0 -0 -0 -0 -0	SDEN   1°   92   WA1   COLOR   CDDE   171   175   175   169	STATION TIL IGMTI  MD   DAY HI  0.5   20   1  TABLES   0.1R  1 TABLES   0.1R  0.2   5 %.	ME	969  BARON METER (mba)  122  A-T  66 66 66 63	CRUISE NO. ST.	ATION JMBER  P. C V WET CC BULR  6  E S A DYN. X 10	DEI T ROTI	PTH DECOMES TO ME STAN SOUND OF STAN SOUND O	SPECIAL SPECIA	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	SCC
CTRY ID.	MESSENGE TIME HR 1/10	79160f	CARD TYPE	DEPTH (m)  0025 0030 0050	260 -0 -0 -0 -0 -0	SDEN ARE 1° 92 WA1 COLOR CDDE ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	STATION TIL (GMT)  MD DAY HID  EE VALUE  18ANS. DIR.  02  5 %.  3273 3274 3273 3274 32736 3282	45 1   SPEED OR   FORCE	969  BAROOF 1222  A-T  66666666663333	CRUISE NO. ST. NO. NO. NO. NO. NO. NO. NO. NO. NO. NO	ATION JMBER  P. C WET CC WET BULR  6 E DYN. X 10	DEF T ROTH	PTH DEC DE	SPECIAL SPECIA	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	NO.C
CTRY ID.	MESSENGE TIME HR 1/10	791608	CARD TYPE	17/10 DEPTH (m)  0025 0030 0050 0050 0075 0075	260 260 -0 -0 -0 -0	SDEN   1°   92   1°   1°   1°   1°   1°   1°   1°   1	STATION TIL (GMT)  MD DAY HI  05 D20 1  FR W  1 TAMS OIR  02  5 %.  32733 3274 32736 3282 32824	263 263 263 264 264	969  BAROOF 1222  A-T  66666666663333	CRUISE ST NO. 1 NI	ATION JMBER  P. C WET CC WET BULR  6 E DYN. X 10	DEF T ROTH	70. SOUND VELDCIT 1438 1438 1438 1438 1439 11439	SPECIAL SPECIA	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	NO.
CTRY ID.	MESSENGE TIME HR 1/10	791608	CARD TYPE OBS STD OBS STD OBS STD OBS STD OBS STD	DEPTH (m)  0025 0030 0050 0075 0075 0100 0125	260 -0 -0 -0 -0 -0 -0 -0	SDEN   1-   92   WAIA   1-   92   WAIA   1-   1-   1-   1-   1-   1-   1-   1	STATION TIL (GMT)  MD DAY HID  FE VALUE OF THE COLUMN TIL (GMT)  18ANS OIR.  18ANS OIR.  32733 3274 32734 32736 3282 32824 3335	ME R.1/10 45 1 IND SMECO OR FORCE S15 263 263 263 264 264 264 268	969  BAROO METEL (mbe)  122  A-T  66666633355	CRUISE ST NO. 1 NI	ATION JMBER  P. 'C  WET  SULB  6  E  DYN, X 10	DEI T RDT	77 D.S.S. OR.S. OR	SPECIAL SPECIA	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	N.O.C
CTRY ID.	MESSENGE TIME HR 1/10 145 145	791608	CARD TYPE  OBS STD STD OBS STD STD	DEPTH (m)  0025 0030 0050 0075 0100 0125 0150	SOUTH   10°   260	169 171 175 175 169 148 109 077	STATION TIL IGMT1 MD DAY HI 05 20 1 FR W 1 11AMS OIR. 02 5 %. 32733 3274 32736 3282 43335 3377 3409	R.1/10 45 1 1 IND SIGM 263 263 263 264 264 268 271 274	969 8AROO METEL (mba) 122 A-T 66666663355	CRUISE ST NO. 181  KB2 054  AIR TEM BULR  2 110  0016728  0016003  0012002	ATION JMBER  P. 'C  WET  SULB  6  E  DYN, X 10	DEIT ROTTE	77 SOUND OFFI H 38 SOUND OFFI H 438 SOUN	SPECIAL TO	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	, Q.C.C
CTRY ID.	MESSENGE TIME HR 1/10	791608	CARD TYPE  OBS STD OBS	0025 0050 0050 0050 0050 0050 0050 0050	-0 -0 -0 -0 -0 -0 -0 -0 -0	SDEN ARE 92 WAI COLOR COLOR 171 175 169 148 148 148 148 109 077 077	STATION TIL IGMT1  MD DAY HI ER WITH ORL  1 LAME OR.  32733 3273 3273 3273 3273 3273 3273 3	ME L1/10 45 1 1 IND SHIP FORCE 515 SIGM/ 263 263 264 264 264 268 271 274 274	969  BARO METER (mbail 122  A-T 66 66 66 66 63 35 5	CRUISE ST NO. ST NI	ATION JAMBER  P. TC WET SULR  6  E SA DYN, X 10	DEIT ROTT	PTH 0 0 0 5 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6	SPECIAL SPECIA	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	NOO
CTRY ID.	MESSENGE TIME (HR 1/10) 145 145 145	79160#	CARD TYPE  OBS STD	DEPTH (m)  2480W  0025 0030 0050 0050 0050 0050 0150 0150 015	-00 -00 -00 -00 -00 -00 -00 -00 -00 -00	169 171 175 175 175 175 175 175 175 177 177	51ATION TIL IGMTI MD DAY HID ER WITH TIL IGMTI 15 CO 1 15 CO 1 15 CO 1 15 CO 1 16 CO 1	ME R.1/10 45 1 1 ND SHID ON SH	969  BARCO METER (mbail 122  A-T 6666666633355	CRUISE ST NO. 1 NI	ATION JAMBER  P. TC WET SULR  6  E SA DYN, X 10	DEFINATION OF THE PROPERTY OF	PTH ON ON STATE OF ST	SPECIAL TO THE TOTAL TO THE TOT	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	NUC
CTRY ID.	MESSENGE TIME HR 1/10 145 145	79160#	CARD TYPE  OBS STD OBS	0025 0050 0050 0050 0050 0050 0050 0050	-0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -	SDEN ARE 92 WAI COLOR COLOR 171 175 169 148 148 148 148 109 077 077	STATION TIL IGMT1  MD DAY HI ER WITH ORL  1 LAME OR.  32733 3273 3273 3273 3273 3273 3273 3	ME L1/10 45 1 1 IND SHIP FORCE 515 SIGM/ 263 263 264 264 264 268 271 274 274	969  BAROO METEL (Inba)  122  A-T  66666633 355 883 3999	CRUISE ST NO. ST NI	ATION JAMBER  P. TC WET SULR  6  E SA DYN, X 10	DEFINATION OF THE PROPERTY OF	PTH 0 0 0 5 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6	7	OBSE OR. F	PO4-P	THER CODE	TYPE AM	NO3-N	\$104-5	OO54	NC/U

TABLE II. Observed and interpolated oceanographic data from stations taken by USCGC SOUTHWIND, 14–28 August 1969, prepared from NODC Listing No. 31–1529.

																									,			7
REFERENCE	SHIP				- =	MARS			NOI		Ī			_	ATOR'S		OEP		MAX. OEPTH	085	WA	VE A TIONS	WEA	CLOUG			HODC	
CTRY IO.	CODE	LATITUO		ONGITUOE	DRIF	SQU			IGMT		YEA	L PL	CRUISE NO.		TATION		ROTT	011	OF S'MPL'S			PER SI	CODE				UMBER	1
COOR NO.	-		1/10	'1/10		10°	1°			HR,1/1(	1	7						_	~					4 6	1		0001	1
311529	15	76142	N O	62593W		259	62 WA			WIND	196	59	WGS	OO .		<u> </u>	041			00	0	X	XI	1 410	1	- 1	0001	1
								T		SPE		ARO		DRY I	W ET	VIS.	NC OB		S PEC									
							COLOR	TRANS (m)	OIR	FOR	L 1.7	(mbs)		ULB	BULB	1000	DEPT	THS	ORSEKA	~ 110/43								
									05	50	7	178	3 0	61	059	7	14	4										
				T.		T		-	100	10.0					<u> </u>	ξ Δ 0	+				Τ.			NO. N	NC N	SI Q4-Si	1	5
	MESSENGR	CAST NO.	CARD	DEPTH	(m)	ī	℃	s	٠/	SI	GMA-	.7	SPECIFIC	ALY-X1	~ l	X 10 <sup>3</sup>	۱. J.,	VELO		02 ml/l		O4-P g = 01/I	10TAL-P 1/10 - Qu	NO2-N vg - 01/1	NO3-N yg - at/i	31 U2 - 31	pН	S C
	HR 1/10					+-		┼-		+		$\dashv$			+	X Iu-			-		+							$\dashv$
		1				1											Ι.				-		l	l	1	l	1	- [ ]
			STD	000			023	12			997		017	483	5 (	0000		141		883								
	161		085	000			023		422		997							141		883 15520	2							
	161	L	OBS	000			006		292		514			067	2 (	097	-			1014	at							
			STD	001			105	32			607		001	947	2 (	1091				1014								
	161	L	OBS	001			105 129	32	400		607 646		001	579	1 (	115	_	144		790								
	16	,	STD	002			130		900		648		001	217	٠. `	, - 1 ,		144		774								
	161		STD				123	32			655		001	488	0 0	130		144		687								
	161	1	OBS	003			122		о́о́з		656								14	680								
	10,	•	STD	005			075	33			672		001	333	8 (	158	1	144	42	634								
	161	l l	OBS	005	1	-0	072	33	224	2	673						-	144		632								
			STD	007	5	-0	009	33	41	2	685		001	207	4 (	190		144		579								
	163	3	OBS	007	7	-0	006		425		686							144		577								
			STD	010			006	33			698		001	086	2 (	219		144		582								
	163	3	OBS	010			006		577		698					27.6		144		582 566								
			STD				014	33			706		001	011	8 (	)245			02 02	565								
	163	3	OBS	T012			015	33	686		706 711		000	957	1 (	270			519	581								
	1.00		STO	015			040	_	, , 775		712		000	,,,		J- 1 0			20	582								
	163	,	OBS				066	33			719		000	886	3 (	0316		145		559								
	163	2	085	T 0 2 0			066	_	883		719		•••	•••				145		559								
	10.	,	STD				086		99		726		000	819	6 (	358	3 :	145	559	540								
	16:	3	OBS	T025			087	33	990	2	726						:	145	60	540								
			STO	030	0	0	165	34	25		742		000	678	8 (	0396			506	524								
	16:	3	085	030	2	0	167	34	263	3 2	743						:	146	808	523								
			STO				161																					
	163	3	OBS	T040	1	0	160																					

REFERENCE			$\neg$		. C	MARSE		STATION		T	П	ORIGIN	ATOR'	s	DEPTH	MAY	. 1	WAVE	WEA-	CLOUP			NODC	
CTRY IO.	CODE	LATITUE		LONGITUDE	NOC	SOUA		IG M		YEA	R		STATIC		10 80110	0.6	0030	ERVATIONS	THER	CODES			UMBER	
COOR NO.			1/10	1/1	0 -	10°	1.	MO DAY	HR.1/1	-	-	NO.	NOMB	K.K.		2.Whr		HGT PER SI	^	TTPE AM				
311529	9 15 1	7605	NC.	063100	į l	259	63 I	38 14	224 WIND			WGS OC			046 NO.	5 2	المما	01X1	X3	1618	1	1	0002	
							COLOR	TRANS O	SPE	EO A	ARO	DRY	WE	7 C001	OBS.	Caren	ECIAL VATIONS							
						_	CODE	(m)	FOI		(mba)	BULS	EUI	8	DEPTH	2								
								0	0   50	0	156	033	01	7 7	14	<u></u>								_
	MESSENGR TIME HR 1/10	OI NO.	CAR		(m)	т	20	s °/.	. 51	GMA-	7	SPECIFIC VOL	JME 19 <sup>7</sup>	₹ △ D DYN. M X 10 <sup>3</sup>		LOCITY	O <sub>2</sub> m1/1	PO4-P µg = a1/1	TOTAL - P pg - et/l	НО <sub>2</sub> -N µg - ol/l	NO3-N yg - 01/1	\$1 O4-\$i	рН	200
	111 (710			1							$\dashv$		$\neg$											П
	1	1 1	ST	rp 000	0.0	0.2	213	2042	' 1	636	- 1	011264	2	0000	1	4392	848	'	1	'	'	'		
	224	4	083				13	2042		636						4392	848							
	224		085		)5	00	140	3148	8 2	528					1	4463	1195							
			S'			-00		3251		613		001888	3	0066	_	4441	936							
	224	4	083			-00		3250		613						4441	936							
			S			-00		3289		646		001579	9	0083	_	4424	810							
	224	4	OBS			-00		3288		646		001/00		0098	_	4424	810 754							
			S1			-00		3300 3320		655 672		001488		0127		4430	674							
	224	,	089			-01		3321		673		001552	. 0	0121		4430	671							
	22.	*	S1			-00		3341		687		001186	.6	0158		4457	634							
	224	4	08			-00		3341		687		001100		0-20		4458	633							
		*	S	-		-00		3358		699		001072	4	0186	1	4481	599							
	224	4	08			-00	_	3358	1 2	699					1	4482	598							
			S <sup>*</sup>	TD 01:	25	0.0	14	3368	2	706		001011	8	0212	1	4502	581							
			S'	rD 01:	50	0.0	38	3377	2	712		000956	0	0237		4518	567							
	224	4	083				40	3377		712						4519	566							
			S'		-		)59	3391		722		000861	6	0282		4538	549							
	224	4	08				061	3392		723						4539	548							
			S'				98	3404		730		000788	32	0324	_	4565	541							
	224	4	OB:				00	3404		730		000700	,	0310		4567	541							
			S				136	3416		737		000725	) (	0362		4592	538							
	224		OB:		-		136	3415		737						4592	538 528							
	224	4	08:	_		-	174	3426		742		000606		0420		4619	510							
	224	,	OB:				167 156	3436 3441		751 756		000600	10	0428		4625 4629	498							
	22		OB:	=			153	3441		756						4629	496							
	22	+	00.	3 04:	,	0,1		2441	7 2						-	.02)	,,,,							

REFERENCE	SHIP			b fi	MARSE		STATION TI			ORIGII	ATOR'	S	OEPTH	MAX. DEPTH		WAVE	WEA-	CLOUG			100C	
CTRY IG.	CODE	LATITU	- 1	LONGITUDE			(GMT)		YEAR		STATIC		DT MOTTO8	OF		ERVATIONS	THER	CODES			ATION .	
CDDE NO.	-		1/10	1/10 =	10°	J*	MO OAY H	R,1/10		NO.	NUMB	EK		2.W b T.2	DIJL	HGT PER SE	A	TYPE AM	1	-+-		
311529	15	7553	6N	060195W	259			83 1	969				0393		-00	lolxl	X6	1518			0003	
					-	WAT	-	/INO	BARO		т —	VIS.	NO. 085.	SPEC	1A L							
						CODE	JEANS OIR.	OR FORCE	Lmbs:		3 W E		DEPTHS	OBSERVA	SNOUL							
					h				2.0	2 0//	03		7.									
					$\overline{}$		00	500	14:	3 044	1 03	-	14		1	1						7.
	MESSENG	CAST	CAR		Т	℃	5 %.	SIG M	A-T	ANOMALY-X		₹ A D		מאנו אווסכ	O 2 ml/L	PO 4-P	TOTAL-P	NO2-N	NO <sub>3</sub> -N	SI O4-Si	ρН	S S
	HR 1/10		117	-	1							X 103	****	5011)		yg - 61/1	pg - 61/1	NB - 01/1	ואס - פע	µg = at/1		C
	1	1			1				- 1					1								
			51	0000 dr	05	12	1665	132	1	014318	31	0000	14	475	801							
	18	3	089	0000		12	16653	132						475	801							
			51	D 0010		39	3249	260		001992	8 8	0082			092							
	18	3	085			39	32485	260			_				092							
		_	51		-00		3291	264		001567	7	0099		438 438	959 959							
	18	3	OBS		-00	-	32912	264 265		001451	0	0114			699							
	18	•	085		-01 -01		33037	265		001451	. 9	0114			699							
	10	3	SI		-00		3325	267		001297	15	0142			628							
	18	9	089		-00		33257	267		00127	-				625							
			51		-00		3346	269	0	001155	8	0173	14	466	591							
	18	3	085		-00	38	33468	269	1				14	467	589							
			S1	rD 0100	-00	19	3356	269	8	001087	6	0201	14	481	513							
	18	3	085		-00		33564	269						481	512							
			S1	_	00		3365	270		001033	31	0227		-	551							
	18	3	089			12	33659	270							552							
		_	51			27	3377	271		000949	19	0252			537 536							
	18	3	083			28	33782 3395	271 272		000835		0297			523							
	3.0	2	SI			61	33949	272		000000	, ,	0291			523							
	18	9	083 S1			88	3405	273		000774	'n	0337			512							
	18	2	089			89	34051	273		000115		0-51			512							
	10	,	51			44	3419	273		000708	32	0374	-		521							
	18	3	OBS			45	34195	273					14	597	521							
	18		083	T0366	01	78	34329	274	7				14	624	509							
	18	3	089	70376	01	82	34373	275	1				14	628	508							

	SHIP	LATITU	DE L	ONGITUDE 1/10		SDEN JARE	STATION THE	YEAR	CRUISE NO.		OR'S TIOH MBER	DEPTH TO BOTTON	MAX. DEPTH OF S'MPL'S	1 .	WAV SERVA		WEA- THER CODE		OUD		\$	NOGC TATION IUMBER	
-	15	7550		60375W	259	50	OR 15 2	13 1969 ING BAR SPEED MET OR [mb	WGS O- A'	QQ4 IR TEMP		0703 NO. OBS. DEPTHS	SPE				X2	5	_			0004	
_		, - · · ·					<del>        </del>	500 15	0 03	34 (	028 7	13			Ļ							1	
1	TIME	CAST HO.	C ARO TYPE	GEPTH (	m) 1	10	5 */	SIGMA-T	SPECIFIC		₹ △ 0 NYN. W		OCITY	O2 ml/		-	OTA L-P - q1/l	NO2-		NO3-N	\$1 O4~\$i  \10 - 84		s c
1			STD	0000	) 0	384	2154	1716	0104	910	0000	14	483	796			l		1				
	213	3	OBS STD	0000	0	384 081	21539 3216	1716 2580	0022	2047	0063	14		796 12 <b>7</b> 6									
	213		OBS STD	0010	-0	081	32163 3290	2580 2646	0015	811	0082	14	492 438	964									
	213		OBS STD OBS	0020 0030 0030	-0	062 064 064	32895 3303 33033	2646 2657 <b>2</b> 657	0014	+742	0098	14	438 441 441	964 846									
	213		STD OBS	0050	0 -0	073	3328 33276	2677 2677	0012	2840	0125	14	444	675 675									
		,	STD	0075	-0	052	3338 3348	2684 2691	0012		0156 0186	14	459 472	650 627									
	213	3	OBS STD	0101	5 <b>-</b> 0	034	33480 3352	2692 2695	0011		0214	14	473 482	626 608									
	213	3	STD OBS	0150	1 -0	013	3357 33570	2698 2698	0010		0242	14	492 492	591									
	213	3	STD OBS STD	0200 10203 0250	3 0	092 097 143	3396 33975 3414	2724 2725 2735	0008		0290	14	553 556 587	560 558 532									
	213	3	OBS STD	T0298	3 0	174	34269 3427	2743 2743	0006		0365	14	610 611	513 513									
	213	3	STD OBS	0400	0 0	182 182	3439 34392	2752 2752	0005	5903	0428	14	632 633	496 496									
	213	3	STD OBS	0500 T0503	3 0	176 176	3444 34443	2756 2757	0005		0485	14	647 648	492									
	213		OBS OBS	0600 T0602 T0682	2 0	175	3445 34449 34458	2757 2757 2758	0005	5476	0540	14	663 664 678	502 502 500									

														T								
REFERENCE	SNIP	LATITU	or .	ONGITUDE	MARS	SOEN	STATION T		EAR F		IGINATO		OEPTN	MAY, OEPTH	OBS	WAV		WEA-	CLOUD			NODC
COOR NO.	COOE	· CXIIIO	1/10	1/10	10°		MO DAY I		ر ۱۰۰	NO.	MUN		BOTTOM	OF S'MPL'S			ER SEA	CODE	TYPE AM			UMBER
+	1-1		1/101	1/10		1				<del>- i</del>				3 2 3						1		
311529	115	7541	ON O	59080W	1258	59   WA		155   19	969		005 TEMP.		0371		_00	0	C [	X2	1 4 8	1	- 1	0005
						COLOR		SPEED	BARO- METER	· —		VIS.	NO.	SPEC								
						CODE	TRANS. DIR.	FORCE	(mbs)	BUL		ET CODE	DEPTHS	OBSERV	V HOWS							
							24	503	200	02	9 0	25 8	14									
		_					24	1303 1				₹ <u>\</u> D				_						1
	MESSENGR	CAST NO.	CARD	DEPTH 6	5) 7	"C	s %.	SIGMA		SPECIFIC Y		OYN, M		DCITY	O <sub>2</sub> ml/l		4-P	101AL-P pg - m1/1	NO2-N ug - al/l	NO3-N pg + al/l	\$1 O4-\$i    10 - 94	ρН
	NR 1/10	1						-				X 10 <sup>3</sup>				) by .	4171	pg - 01/1	pg - 01/1	pg + 61/1	pg - 6171	
														- 1			- 1					
			STD	0000	0:	319	2418	1929	9	0084	303	0000	14	489	794							
	159	,	OBS	0000	0:	319	24182	1929	9					489	794							
	155	•	OBS	0005	0	170	30832	2468							125							
			STD	0010		046	3212	2579		0022	190	0053			100							
	155	<b>5</b>	OBS	0010		046	32121	2579						476								
			STD	0020		006	3280	2635		0016	784	0073		468 1	_							
	155		085	0020		006	32804	2639			000	0000		468 1	_							
			STD	0030		059	3301	2655		0014	952	0089		443 443	887 887							
	155		OBS	0030		059	33008 33258	2655						454	648							
	155	•	085	0049 0050		050 050	3327	2679 2679		0012	076	0117		454	649							
	155		STD	0074		339	33420	2687		0012	710	0111		465	651							
	10.	,	STD	0075		038	3343	2688		0011	792	0147		466	650							
	155	5	OBS	0098		016	33544	2696						482	620							
	•		STD	0100		013	3355	2696		0010	981	0176	14	483	617							
			STD	0125	0.0	021	3360	2699	9	0010	764	0203	14	504	589							
	155	<b>,</b>	085	0147	00	048	33677	2704	4					521	572							
			STD	0150	00	052	3370	2709		0010	171	0229		523	571							
	155	6	OBS	0196		096	33937	2722						554	560							
			STD	0200		097	3394	2722		8000	627	0276		555	559							
	155	5	085	T0243		114	34038	2729						571	544							
			STD	0250		121	3407	2731		0007	812	0317		576	540							
	155		085	10294		148	34209	2740		0001	000	0354		597	518							
	2.00		STD	0300		148	3422	2741		0006	885	0354		599	516							
	169		085	T0343		148	34288	2746						607	498							
	169	)	085	0354	0	148	34312	2748	В				14	609	492							

REFERENCE	SNIP				SDEN	STATION				RIGINA	TO R°S		DEPTH	MAX. OEPTN		WAVE	WEA-	CLOUD			NODC
COOF NO.	CODE	LATTIUDE 1/10	LONGITUOE		IARE A	MO DAY	HR,1/10	YEAR	CRUISE NO.		ATION	7	TO BOTTOM	OF S'MPL'S		HGT PER S	THER	TYPE AM	_}		UMBER
311529	15	75390N	059140	258	WATE	08 18	182 WIND	1969 BARG	0- 4	006 UR TEM		VIS	0172 NO. ORS.	SPE	00	o x	Х2	4 8			0006
					COOE	im) Di	FORC	to be			BULR		OEPTHS	ORDERV							
						24	\$ 503	20	0 0	29	$\overline{}$	8	11						,		
	MESSENGR TIME NR 1/10	20031 1 00	RD DEPTH	I (m) I	2	s */	SIG	MA-T		VOLUM	' DYI	△ 0 N. M. 10 <sup>3</sup>	SOU		0 2 ml/l	PO4-P pg-ot/I	ΤΟΤΑ L — P 9 - οΙ/Ι	NO2-N NO3-N	NO3-N	St O4-Si	PH C
			TD 00		254	2531	_	23	007	5278	00	00		475	755	•			•	•	
	182				254	25313		23					144		755						
	182		S 00		202 092	30881		70 71	002	2891	00	)49		528 496	1023						
	182				074	32237		86	002	2091	00	47		+90							
	202		TD 00:		025	3272		30	001	7293	00	169	144		807						
	182	08			038	32802	2 26	37					144	449	766						
			TD 00:		049	3298		52	001	5204	00	85	144		730						
	182				052	33031		56					144		715						
	100		TD 00		055	3325		74	001	3106	0.1	14	144		613						
	182		S 00		056 037	33287		77 86	001	1949	0.1	45	144		598 580						
	182				031	33450		89	001	1747	0.	.49	144		578						
			TD 01		014	3356		97	001	0900	01	74	144		580						
	182				006	33601		00					144		581						
			TD 01:	25 0	003	3362	27	01	001	0519	02	00	144		578						
			TD 01		035	3373		09	000	9847	02	26	145	16	570						
	182				051	33780		12					145		566						
	182				074	33860		17					149	39	561						
	182	OB	S T01	72		33885	5								584						

																					_
CTRY ID.	SNIP	LATITU	DE LO	NGITUDE NOT	MARSDEN SOUARE	STATION TH		YEAR		STATION		DEPTH TO	DEPTH	DBS	WAVE ERVATIONS	WEA THER	CODE			NDDC STATION	
CODE NO.	CODE	·	1/10	1/10 E	10" 1"	MD DAY H	1/10		NO.	NUMBER		BDTTOM	S'MPL"	DIR.	HGT PER SI	CDDE	TYPE AA	11	_	NUMBER	
311529	15	7536	ON 1 05	9450W	258 59		30 1	969	WGS 00			0630		امم	o x	X1	1513		ı	0007	7
					COLOR	TRANS. DIR	SPEED	METE	R DRY	WET	VIS. CDD8	OBS.	SPE	CIAL							
					CODE	(m)	FORCE	(mbs		BULB	+	DEPTHS									
				1		00	500	204		066		15									$\neg$
	MESSENGR	CAST	TYPE	DEPTH (m)	7 ℃	s °4.	SIGM	A-T	ANDMALY-X	ME DY	△ D rN. M. r 10 <sup>3</sup>	VELO	DCITY	Q2 ml/l	PO4-P yg - of/l	TD TA L—#	NO2-N pg - at/l	ND3-N pg - at/l	SI □4! yg - at/		S C
	MR 1/10										. 10	+					-	170	-	-	+
	•	' '	STD	0000	0566	2885	' 22 <b>7</b>	7	005095	8 0	000	144	656	728	1		1	1	1	1	11
	230		085	0000	0566	28852	227						656	728							
	230	)	OBS	0005 0010	0681 0405	30541 3187	239 253		002665	8 00	039		725 530	730 928							
	230	)	OBS	0010	0405	31868	253					146	530	928							
	200		STO	0020	0151	3278	262		001780	0 00	061			1012							
	230		OBS STD	0020 0030	0151 0009	32775 3311	262 266		001444	3 00	077		534 : 476	928							
	230		OBS	0030	0009	33112	266						476	928							
	230		STD OBS	0050 0050	-0064 -0064	3336 33355	268 268		001226	9 0.	104	144	449	679 6 <b>7</b> 9							
	230		OBS	0074	-0026	33509	269						473	620							
	224		STD	0075	-0023	3351	269		001124	7 01	133	144		620							
	234		OBS STD	0099 0100	0043 0044	33641 3365	270 270		001051	0 01	160	14:	510 511	607 606							
			ST0	0125	0064	3377	271	0	000971		186	145	526	578							
	234		OBS STD	0149 0150	0085 0086	33872 3388	271 271		000900	8 01	209	149		560 560							
	234		OBS	0198	0131	34039	272		000,00		-0,		572	553							
			STD	0200	0132	3404	272		000810		252	149		553							
	234		STD OBS	0250 0298	0149 0161	3413 34212	273		000755	9 02	291	149		540 527							
			STD	0300	0161	3422	274	0	000698	5 03	327	146	604	526							
	238		OBS STD	T0399 0400	0169 0169	34357 3436	275 275		000602	5 02	392	146	526	496 496							
	238		OBS	T0493	0178	34418	275		000002	0 -	772	146		486							
			ST0	0500	0178	3442	275		000568	2 04	+51	146		488							
	238 238		085 085	T0537 0548	0178	34424 34422	275	5				146	554	496 504							
	-30																				
														504							
REFERENCE	SHIP	LATITUI	DE LO	NGITUDE 122	MARSDEN SOUARE	STATION TIA		YEAR	ORIGIN		$\exists$	DEPTH TD	MAX. DEPTN	[ ,	SVAW SNOITAVE	W EA-	CLDUD			NDDC	]
REFERENCE CTRY IO. CDDE NO.	SHIP	LATITUI	DE LO	NGITUDE SOON	SOUARE	STATION TIA	] '	YEAR	CRUISE S	ATOR'S TATION NUMBER		DEPTH TD IOTTOM	MAX. DEPTN OF S'MPL'S	ORSE		TNER	CLDUD CODES			NDDC STATION NUMBER	
CTRY ID.	CODE	7510	1/10	1/10 0 =	SOUARE 10' 1'	16MT) MO DAY HR	60 1	YEAR	CRUISE NO. P	TATION LUMBER		795	DEPTN	ORSE	RVATIONS	TNER	CODES			NOITATE	
CTRY ID.	CODE	•	1/10	1/10 0 =	10' 1' 258 59 (	IGMTI MO DAY HR DB 19 1	.1/10	969 MARO METER	WGS OO	TATION HUMBER 9 AP. "C	VIS	795 ND. ORS.	OF S'MPL'S	ORSE OIR OO	HGT PER SE	THER	TYPE AM			NUMBER	
CTRY ID.	CODE	•	1/10	1/10 0 =	10' 1' 258 59 (	(GMT)  MO DAY HR  PROPERTY OF THE PROPERTY OF	ND SPEED OR PORCE	969 RARO METER (mbal	WGS OO AIR TEP	TATION HUMBER	VIS	795 ND. ORS. DEPTHS	OF OF S'MPL'S	ORSE OIR OO	HGT PER SE	THER	TYPE AM			NUMBER	
CTRY ID.	15	7510	1/10 8N 05	1/10 0 =	10' 1' 258 59 (	(GMT)  MO DAY HR  PROPERTY OF THE PROPERTY OF	.1/10 60 1 IND SPEED OR	969 MARO METEI (mbal	WGS OO AIR TE/ BULR  0 050	TATION IUMBER  9 AP. C WET HULR  033	VIS.	795 ND. ORS. DEPTHS	SPECORSERV	ORSE OIR OO	HGT PER SE	THER	TYPE AM			NUMBER	
CTRY ID.	15	7510	1/10	1/10 0 =	10' 1' 258 59 (	(GMT)  MO DAY HR  PROPERTY OF THE PROPERTY OF	ND SPEED OR PORCE	969 RARO METEI (mbal	WGS OO AIR TEP	TATION JUMBER  9 AP. 'C WET BULB  033	VIS.	795 ND. ORS. DEPTHS	SPECORSERV	ORSE OIR OO	HGT PER SE	THER	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	w00
CTRY ID.	15	7510	1/10 BN 05	* 17/10   * E	SOUARE  10' 1' 258 59 (  WAT  COLOR CODE	IGMT) MO DAY HR DB 19 1 ER WI TRANS DIR. O4	SPEED OR PORCE	969 RARO METEI (mbal	GRUISE NO. P	TATION JUMBER  9 AP. 'C WET BULB  033	VIS.	795 ND. ORS. DEPTHS	SPECORSERV	ORSE DIR.	PO4-P	XO TOTAL-P	TYPE AM	7		OOO8	500
CTRY ID.	15	7510	1/10 BN 05	* 17/10   * E	SOUARE  10' 1' 258 59 (  WAT  COLOR CODE	IGMT) MO DAY HR DB 19 1 ER WI TRANS DIR. O4	SPEED OR PORCE	969 RARO METER (mbal 200	GRUISE NO. P	TATION HUMBER  9  AP. TO  WET AULR  033  ME DY. X	VIS.	795 ND. ORS. DEPTHS	SPECOASERV	ORSE DIR.	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	500
CTRY ID.	15	7510	CARD TYPE STD OBS	9105W   DEFTN (m)	SOUARE  10' 1' 258 59 (	IGMT) MO DAY HR DB 19 1 ER WI YEANS DIR. 04 5 '%.	17/10 60 1 ND SPEED OR FORCE 511 SIGM/	969  RARO METEI (mbal 200  A-T	GRUISE NO. SENO. S	TATION HUMBER  9 AP. 'C WET AULR  033 ME ST. DY. X	VIS. CODE 8	7795 ND. ORS. DEPTHS 14	SPECOASERV	ORSE OIR	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	50C
CTRY ID.	15  MESSENGR TIME C	7510	CARD TYPE	- 1/10 0 2 9105 W 9105 W 0000	SOUARE 10' 1' 258 59 ( WAT COLOR CODE	IGMT) MO DAY HR D8 19 1 ER WI TRANS DIR. 04	SPEED OR FORCE S11 SIGM/	969	GRUISE NO. BE NO	TATION DUMBER  9 MP. TC WET AULR  033  ME ST DY. X	VIS. CODE	ND. ORS. DEPTHS 14	SPECOASERV	ORSE OIR	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	MUU
CTRY ID.	15  MESSENGR TIME CHART 1/10  160	7510	CARD TYPE  STD OBS STO OBS STD	0000 0010 0020	SOUARE 10' 1' 258 59 WAT COLOR CODE  1 ° C  0609 0609 0252 0054	16M1) MO DAY HR DB 19 1 ER W TRANS DIR.  04 5 '4.  3075 30749 3187 31866 3295	1/10 60 1 ND SPED FORCE 511 SIGM/ 242 254 254 264	969  RARO METEI (mbal 200 A-T	GRUISE NO. SENO. S	TATION DUMBER  9 MP. TC WET AULR  033  ME ST DY. X	VIS. CODE 8	140 140 140 140 146 146 146 146 146	SPECORSERV.	0858 01k 1 00 CIAL ATIONS 755 755 924 924 975	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	500
CTRY ID.	15  MESSENGR TIME C HR 1/10	7510	CARD TYPE  STD OBS STO OBS	0000 0010 0010	SOUARE  10' 1' 258 59 ( WAT  COLOR CODE  1 %  0609 0609 0252 0252	16M1) MO DAY HR 19 1 ER U  17RAN1 DIR  04  5 */  3075 30749 3187 31866	1/10 60 1 ND SPEED OR PORCE S11 SIGM/ 242 242 254 254	969  RARO METEI (mbal 200 A-T  1 1 5 5 5 5	GRUISE NO. BE NO	74 TION HUMBER  9 AP. 10  WET HULB  033  ME ST. 10  9 000  9 000	VIS. CODE 8	140 146 146 146	SPECORSERV.	0858 01R 10 00 00 00 00 00 00 00 00 00 00 00 00	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	MUU
CTRY ID.	15  MESSENGR TIME CHART 1/10  160	7510	CARD TYPE  STD OBS STO OBS STD OBS STD OBS	0000 0000 0010 0020 0030 0030	SOUARE 10' 1' 258 59 WAT COLOR CODE  1 % 0609 0609 0252 0252 0054 0054 -0004	(GMT) MO DAY MR DER WITH DIR OR S '-4.  3075 30749 31876 3295 32952 32952 33315 33145	1//10 60 1 ND SPEED OR PORCE 511 SIGM/ 242 254 254 264 266 266	969  RARO METER (mbal 2000 A-T  1 1 5 5 5 3 3	CRUISE   S   NO.	7ATION HUMBER 99	8 A D N. M. 1103	146 146 146 146 146 146 146 146 146	SPEC OASERV.  SPEC OASERV.  SPEC OASERV.  SPEC OASERV.  SPEC OASERV.	ORSE ORSE OO OO CIAL OO OO OO OO OO OO OO OO OO O	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	5000
CTRY ID.	MESSENGR TIME C NR 1/10	7510	CARD TYPE  SID OBS SID	0000 0010 0020 0030 0030 0050	10° 11° 12° 12° 12° 12° 12° 12° 12° 12° 12	(GMT)  MO DAY HIS  DB 19 1  TRANS OR.  04 1  5 '-4.  3075 30749 3187 31865 32952 3315 33145 33145 3333	242 254 266 266 268	969  RARO METEI (mbal 200 A-T 1 1 5 5 5 5 3 3 3 1 1	CRUISE NO. 1	7ATION HUMBER 99	8 A D N. M. 103	146 146 146 146 146 146 146 146 146	SPECORSERV.  SPECORSERV.  SPECORSERV.  SPECORSERV.  SPECORSERV.	ORSE OIR OIR OIR OIR OIR OIR OIR OIR	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	NGC
CTRY ID.	MESSENGA TIME CHR 1/10	CAST T NO.	CARD TYPE  STD OBS STO	0000 0000 0010 0020 0030 0030 0050 0075	50UARE 10' 1' 258 59 (	GMT)  MO DAY MR  BR 19 1  ER OR  TRANS DIR  S '%.  3075 30749 3187 31866 3295 32952 32952 3315 33145 33338 33328 33349	242 254 264 266 268 268 269	969  MARON METER (mba)  2000  A-T  1 1 5 5 5 5 1 1 1 3	CRUISE   S   NO.	74 TION HUMBER 9 46. C WET RULR 033 ME SY 9 00 5 00 7 00	8 A D N. M. 1103	1001TOM 1795 ND. 001S. ND. 001S. ND. 01S. ND. 146 146 146 146 145 145 146 146 146 146 146 146 146 146 146 146	SPEC ORSERV.	0856 012 00 02 m1/1 755 755 7924 924 975 866 866 697 662	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	NUU.
CTRY ID.	MESSENGR TIME C NR 1/10	CAST T NO.	CARD TYPE  SID OBS SID	0000 0000 0010 0020 0020 0030 0050 0075	T T TO	MO DAY MA B 19 1 ER OR TRAMS DIR 3075 30749 31866 3295 3295 3295 33145 3333 33328 3349 3349	17/10 1 1 ND SPEED OR 17 ONC. 1 SIGM.  24 2 2 4 2 2 5 4 4 2 6 6 2 6 6 2 6 8 2 6 9 2 6 9 2 6 9 2 6 9	969  AAAO METER (mbal 2000  A-T 1 1 1 5 5 5 5 3 3 3 1 1 1 3 3 3 3 3 3 3	CRUISE   S   NO.	17 TATION NUMBER 99	8 A. M. A. D. D. A. D.	TO DOUTOM  TO ONE S. C.	SPECONSERV.	058 012 00 00 00 00 00 00 00 00 00 00 00 00 00	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	200
CTRY ID.	MESSENGA TIME CHR 1/10	7510 Cast	CARD TYPE  STD OBS STO	0000 0000 0010 0020 0030 0030 0050 0075	50UARE 10' 1' 258 59 (	GMT)  MO DAY MR  BR 19 1  ER OR  TRANS DIR  S '%.  3075 30749 3187 31866 3295 32952 32952 3315 33145 33338 33328 33349	242 254 264 266 268 268 269	969  MAAOO METERI (mbal 2000  A-T 1 1 1 5 5 5 5 5 3 3 3 1 1 1 3 3 3 4 4	CRUISE   S   NO.   P   WGS   OO   Alik TEF   D   O50   STREINE VOLU ANOMALY-XI  003716   O02539   001568   O01248	17 TATION NUMBER 99	8 A D. N. M. 103	1001TOM 1795 ND. 001S. ND. 001S. ND. 01S. ND. 146 146 146 146 145 145 146 146 146 146 146 146 146 146 146 146	SPECONSERV.	0856 012 00 02 m1/1 755 755 7924 924 975 866 866 697 662	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	900
CTRY ID.	15  MESSENGR TIME 9 NR 1/10  160  160  160  160  160	7510 Cast	CARD TYPE SID OBS SID	0000 0000 0010 0010 0020 0030 0050 0050 0075 0075 0100 0125	0609 0609 0609 0609 0252 0252 0054 -0004 -0004 -0061 -0058 -0058 0010 0010	10 (GMT) (GM	242 242 254 264 264 268 269 270 270	969  AAAO METER (mbail 11 15 55 55 53 33 11 13 34 44 99	CRUISE   S   NO.	TATION NUMBER 99 MP. C WET NULL NUMBER 99 MP. C WET NULL NUMBER 99 MP. C WET NULL NUMBER 99 MP. C WET NUMB	000 000 000 000 000 000 000 000 000 00	TO T	DEPTH OF STAPL'S SPECONSERV.  ND CITY	755 755 755 755 755 755 755 755 755 755	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	AUU .
CTRY ID.	15  MESSENGR TIME 9 NR 1/10  160  160  160  160  160	7510 Cast	CARD TYPE  SID OBS	0000 0000 0010 0020 0020 0030 0050 0050 0075 0075 0100 T0100 0125 0150	0609 0609 0609 0252 0252 0054 -0004 -0061 -0061 -0068 -0058 0010 0010 0041	MO DAY HIS DB 19 1 I TAMAS DIR. 3075 30749 3187 31866 32952 3315 33145 33145 33333 33328 33489 3366 33655 3374 3382	SIGM.  SIGM. S	969  RANO METER (1200)  A-T  1 1 1 5 5 5 5 3 3 3 1 1 1 3 3 3 4 4 4 9 9 4	CRUISE   S   NO.   N	TATION NO. 10 Met No.	000 000 000 000 000 000 000 000 000 00	TO T	SPECORSERV.  SPECO	015 015 01 01 01 01 01 01 01 01 01 01 01 01 01	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	NUU
CTRY ID.	15  MESSENGR TIME 9 NR 1/10  160  160  160  160  160	7510 CAST NO.	CARD TYPE SID OBS	0000 0000 0010 0020 0030 0050 0050 0050 0075 0100 T0100 0125 0150 0201	0609 0609 0609 0609 0252 0054 -0004 -00061 -0058 -0058 0010 0041 0069 0115	GMT)  MO DAY MR  B 19 1  ER OR  TRANS DIR  S '\(.)  3075 30749 3187 31866 3295 32952 32952 3315 33145 3333 33349 3349 3349 3349 3349 3349 3	242 254 254 266 268 269 270 270 271 272 272 272 272 272 272 272 272 272	969 BAROO METER 2000 A-1 1 1 1 5 5 5 5 3 3 1 1 1 3 3 4 4 9 4 4 5 5	CRUISE   S   NO.	TATION NUMBER 9 44. C WET NULL NUMBER 9 00 033 01 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000 000 000 000 000 000 000 000	TO T	SPECONSERV.  ND CGITY  598 598 664 664 677 650 658 668 668 668 668 668 668	755 755 755 755 755 924 975 975 966 662 662 661 604 598 585	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	100
CTRY ID.	Nessence   Nessence	7510 CAST NO.	1/10	0000 0000 0010 0010 0020 0030 0050 0050 0075 0075 0100 T0100 0125 0150 0200 0250	0609 0609 0609 0252 0252 0054 -0004 -0061 -0061 -0068 -0058 0010 0041 0069 0114 0069	10 (CMT) (CM	242 254 264 266 268 269 270 271 272 272 273	969  RADO METER (mbal 2000  A-T  11 15 55 53 31 11 33 44 49 44 55 2	CRUISE   S   NO.   NO.   S   NO.   N	Name	ος ο	TO T	DEPTH OF ORSERV.  SPECONSERV.	03 mill 00 mil	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	200
CTRY ID.	Nessence   Nessence	7510 CAST 7 NO.	CARD TYPE STD OBS	0000 0000 0000 0010 0020 0030 0050 0050 0050 0075 0100 T0100 0125 0150 0200 0201 0200 0201 0200 0201	T T COLOR CODE  10' 1' 258 59 (WAT COLOR CODE CODE CODE CODE CODE CODE CODE CODE	MO DAY HIS COMT OF TAMES OF TA	3 IGM: SIGM:	969  AAAO METER 1 200  AA-T  1 1 5 5 5 5 5 3 3 3 1 1 1 3 3 4 4 4 9 9 4 4 4 5 5 2 2 9 9 9	CRUISE   S   NO.	Nation   N	ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο	TO T	DEPTIN OF ORSERV.  ND CITY    998 664 664 92 770 750 750 750 750 750 750 750 750 750	755 755 755 755 755 924 975 975 966 662 662 661 604 598 585	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	100
CTRY ID.	15	75100 GAST	1/10	0000 0000 0010 0010 0010 0010 0010 0050 0050 0050 0075 0075	0609 0609 0609 0609 0252 0252 0054 -0004 -0061 -0061 -0058 -0058 0010 0041 0069 0114 0115 0143 0163 0164 0178	MO DAY PIX DR   10 PK   10 PK	242 254 264 264 264 264 264 266 269 270 270 271 272 273 273 273 273 273 273 273	969  RADOS (mbal)  2000  A-1  1  1  5  5  5  3  3  1  1  2  4  4  4  9  4  4  5  7  7  8  8  8  9  9  1  1  1  1  1  1  1  1  1  1  1	CRUISE   S   NO.   NO.   S   NO.   N	Nation   N	ος ο	140 SOU VELCO VELC	DEPTH OF OSSERV.  SPECONSERV.	03 ml/s   00   03 ml/s   03 ml/s   03 ml/s   04 ml/s   05 ml/s   05 ml/s   06 ml/s   07 ml/s   07 ml/s   08 ml/s   08 ml/s   08 ml/s   09 ml/s   0	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	
CTRY ID.	15	7510 CAST NO.	CARD TYPE STD OBS	0000 0000 0000 0010 0020 0030 0050 0050 0050 0075 0100 T0100 0125 0150 0200 0201 0200 0201 0200 0201	T T COLOR CODE  10' 1' 258 59 (WAT COLOR CODE CODE CODE CODE CODE CODE CODE CODE	MO DAY HIS COMT OF TAMES OF TA	3 IGM: SIGM:	969  MARION METERS  200  A-T  1  1  5  5  3  3  4  4  4  4  5  2  9  9  1  1  1  1  1  1  1  1  1  1  1	CRUISE   S   NO.	Nation   N	ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο	146 146 146 146 146 146 146 146 146 146	DEPTIN OF ORSERV.  ND ORSERV.  ND CITY	015 Marions   02 ml/l   755   755   924   975   975   975   662   666   666   666   667   666   667   665   657   658   558    558   558   558   558    558   558   558    558   558    558   558    558    558    558   558    558	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	
CTRY ID.	15	7510 CAST NO.	1/10	0000 0000 0000 0010 0010 0010 0020 0030 0050 0050 0075 0075 0100 0125 0150 0200 0201 0250 0300 01400 0400 0400 0400 0400 0400	0609 0609 0609 0609 0252 0054 -0004 -0004 -0061 -0058 -0058 -0058 0010 0041 0069 011 0069 011 011 011 011 011 011 011 011 011 01	S   Continue   Conti	2422 254 264 266 266 269 270 271 272 273 275 275 275 275 275	969  RAADO (METER MATERIA)  200  A-T  11  15  55  53  33  11  13  34  44  99  44  45  52  99  12  88  88	CRUISE   S   NO.	Nation   N	ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο	140 VELO 144 144 144 144 145 145 145 146 146 146 146 146 146 146 146 146 146	DEPTH OF OSSERV.  SPECO OSSERV.  598 664 664 92 670 658 668 664 670 650 658 6664 670 670 670 670 670 670 670 670 670 670	03 m/si 00 03 m/si 755 755 755 924 975 975 975 866 667 667 667 667 667 667 667	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	
CTRY ID.	15	7510 CAST NO.	1/10	0000 0000 0010 0010 0020 0030 0050 0050 0075 0075 0100 125 0150 0200 0200 0300 10403 10403 10403 10499 0593	0609 0609 0609 0252 0252 0054 0054 -0004 -0061 -0061 -0068 -0058 0010 0010 0041 0069 0114 0115 0163 0164 0178 0167 0166	10 (GMT) (GM	242 254 254 264 266 268 268 268 269 270 270 271 272 273 273 273 273 275 275 275 275 275 275 275 275 275 275	969  MARIOE METERS  2000  A-T  11 15 55 55 33 11 13 33 44 49 94 45 52 99 91 12 88 80	CRUISE   S   NO.   N	TATION 11 MARKET 12 MARKET	000 031 052 067 123 150 175 199 244 321 386	140 SOUVELO 144 144 144 144 144 144 144 144 144 14	DEPTIN OF ORSERV.  ND ORSERV.	03 mill 00 02 mill 00	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	100
CTRY ID.	15	7510 CAST NO.	1/10	0000 0000 0000 0010 0010 0020 0030 0050 0050 0075 0100 70100 0125 0150 0201 0201 0200 0201 0200 0201 0250 0300 70403 70499 0500 70593 0600 0700	0609 0609 0609 0609 0252 0252 0054 -0004 -0004 -0061 -0058 -0058 0010 0041 0069 0114 015 0143 0163 0164 0178 0167 0166 0166 0160	10 (GMT) (GM	2422544266626626626927027027122732752756275627662766276627662766276627662	969  RAADO METER (mbal 2000  A-T 1 1 1 5 5 5 5 5 3 3 3 1 1 1 3 3 3 4 4 4 9 9 4 4 4 5 5 2 9 9 9 1 2 8 8 8 0 0 0 1 1	CRUISE   S   NO.   N	TATION III MBER 9 47. C WELL 8 17. C WELL 8	VIS CODE   VIS CODE	146 144 144 144 144 144 144 144 144 144	DEPTH OF STAFFUS OSSERV.  SPECO OSSE	03 m/si 00 00 02 m/si 755 755 924 975 975 866 866 697 662 662 6610 604 598 5562 5542 5516 5550 5500 5500 5500	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	100
CTRY ID.	15	7510 GAST NO.	1/10	0000 0000 0010 0010 0020 0030 0050 0050 0075 0100 0125 0150 0201 0201 0201 0201 020	0609 0609 0609 0252 0252 0054 -0004 -0061 -0058 -0058 -0010 0010 0041 0069 0114 0115 0143 0163 0164 0178 0167 0166	10 (GMT)  10 (GM	242 242 254 264 266 268 269 270 271 271 272 273 273 275 275 275 275 275 275 275 275 275 275	969  MARIOE MATTER  2000  A-T  1  1  1  5  5  5  3  1  1  3  4  4  9  4  4  5  2  9  1  1  1  1  1  1  1  1  1  1  1  1	CRUISE   S   NO.   NO.   S   NO.   N	TATION III MBER 9 47. C WELL 8 17. C WELL 8	000 031 052 067 199 244 284 321 386	140 SOUNTOM VELO 1440 1444 1444 1444 1444 1444 1444 144	DEPTIN OF ORSERV.  ND ORSERV.	015   016	PO4-P	XO TOTAL-P	TYPE AM	NO <sub>3</sub> -N	SI O4-S	OOO8	

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REFERENCE			- =	M AR SOU	N3D2	STATI	ON T		YEAR		RIGINA		_	OÉPTN TO	MAX		WAVE		WEA-	CLOUG	1		NOOC	
CTRY ID. CODE	LATITUDE	LONGITU	lā.						IEAR	CRUISE NO.		ATION JMBER		BOTTON	S'MPL		HGT PI		CODE	TYPE AM	-		NUMBÉR	
COOL NO.	1/10	-	1/10	10°	1.	WO O	AT	4R,1/10		1.01			$\rightarrow$		+		-					-		1
311529 15	75110N	05853	owl	258					1969		008		, 1	0274		100	lo lx		l xo	1 10	1	- 1	0009	/1
					WA	_	1	WIND	BARG	)·	IR TEM		VIS	NO. 085.		CIAL								
					COLOR	TRANS.	DIR	OR	M ETE		RY JLB	WET	COOE	DEPTHS	OBSER	ATIONS								
								1	1		- 1	022		2.2	1									
						<del>                                     </del>	35	507	18	6   0:	50	037	8	11			_						7	
MESSENGI TIME	CAST CA	IND OIL	PTH (m)	, [ т	℃	s .	٠/	SIGA	MA-T	SPECIFIC		JE DY	A 0,	. 50	OCITY	O 2 m1/1		4-P	TOTAL-P	NO2-N	NO3-N	SI O4-		c c
HR 1/10		IPE .								Anomi		)	(103	VEC	OCIA1		, pg .	st/l	μg = et/l	µg - ol/l	yg - a1/l	hā - a.	-	
								1																
'	' ' <sub>5</sub>	TD C	0000	. 0	563	305	6	24	12	0038	3095	00	000	14	677	773								
18			000	0	563	305	58	24	12						677	773								
18:		s c	005	0	550	304	95	24							672	784								
	S	TD C	010		246	321		25		0023	3448	00	31			1029								
18		_	010		246	321		25							565									
			020		087	328		26		0016	0631	. 00	051			1022								
18		_	020		087	328		26		001			066		465	1022 892								
			0030		014	330	-	26 26		0014	450	01	000		465	892								
18			030		014	332		26		001	2851	0.0	094		452	691								
18			050		054	332		26		001	2001		0 , 4		452	691								
10			075		043	334	-	26		001	1541	0	124		464	637								
18	_		076		042	334		26		002					465	636								
			100		016	335		26		0016	0879	0	152	14	497	622								
18			100		016	335	82	26	98					14	497	622								
		TD C	125	0	041	337	1	27	07	001	0035	0	178	14	514	606								
	9	TD C	150	0	064	338	3	27	15	000	9254	0	203		531	589								
18	1 08	S TO	152	-	066	338	-	27							532	588								
	_		200		102	340		27		000	B205	0	246		558	557								
18			201		103	340		27							559	556								
18	1 08	S TO	210	0	109	340	25	27	28					14	564	554								

REFERENCE SHIP CODE NO.	TITUDE LO	NGITUGE NOCTE	MARSOEN SOUARE	STATION TIME (GMT)	YEAR		TOR'S ATION JABER	OEPTH TO BOTTOM	OF	WAVE OBSERVATIONS	CODE	CLOUD		5	NODC TATION TUMBER
								0366	1	0 0 X	X1	5 2			0010
311727/13 114	WATER WIND BARD- AIR TEMP. °C							NO. OBS. OEPTNS	SPECIAL OBSERVATION		,			,	
				21 5	07 18	5 050	042 8	12							
MESSENGE CA TIME OF NO HR 1/10	ST CARD TYPE	OEPTH (m)	T *C	s °/.	SIGMA-T	SPECIFIC VOLUM		A	OCITY OZ 1	PO4-P pg - et/l	101AL-P pg - ot/l	NO2-N µg - ol/l	NO3-N	\$1 O4-\$i	
	ST0	0000	0374	2679	2132	0064805	0000		548 79						
146	OBS	0000	0374	26792	2132	0000500			548 79						
144	STD OBS	0010 0010	0178 0178		2596 2596	0020520	0043		539 107 539 107						
146	STD	0010	-0034	3285	2641	0016239	0061		451 81						
146	085	0020	-0034	32853	2641	001023	0001		451 81						
140	STD	0030	-0053	3307	2660	0014493	0076		447 62						
146	OBS	0030	-0053		2660	001,5	0010		447 62						
146	OBS	0049	-0068	33271	2676			144	446 56						
	STD	0050	-0067	3328	2677	0012832	0104	14	446 56	1					
146	OBS	0074	-0043	33447	2689			14	464 56	6					
	STD	0075	-0043	3345	2690	0011620	0134	14	464 56	6					
146	OBS	0098	-0031	33564	2698			14	475 56	0					
	STD	0100	-0030	3357	2699	0010750	0162	14	476 55	9					
	ST0	0125	-0013	3366	2705	0010136	0188	14	489 54	.7					
146	OBS	T0149	0003	33746	2711			145	502 53	9					
	STO	0150	0004	3375	2712	0009530	0213	145	502 53	9					
146	OBS	T0196	0033	33900	2722			14	525 53	1					
	STD	0200	0035	3391	2723	0008475	0258	145	527 53	0					
	STD	0250	0061	3400	2729	0007946	0299	145	548 51	7					
146	obs	T0290	0078	34099	2736			145	564 51	5					
	STD	0300		3413					51	6					
146	OBS	0317		34184					51	7					
146	OBS	0327		34216					51	1					

STEP   Part   Color   Part   Part   Color   Part   Color   Part   Part   Color   Part   Part   Color   Part   Part   Color   Part   Part   Part   Color   Part   Part   Part   Color   Part   Part																
STD   ODG   ODG	SHIP	LATITUDE	LONGITUDE	MARSDEN	STATION THE				DEPTH D	EPTH OBS						
Table   15	CODE NO. CODE									OF		0000				
WATES   WATES   MAD   MATES   MATES	311520 15		05748 W				WGS 011		0934							0011
	. 311329/13 /	1440 14 1	05140 #1			IND	A ID TE AA I	. %	1		10 1/1	1 //4	1 2 . 2	'	'	0011
						OR MET	ER ORY	WET COD								
Note   Care   Care   Care   Differ (e)   T U   5 %.   SIGMA-T   Michael Volume   SiN Do.   Sin Differ (e)   T U   Si Manual   Sin Do.   Sin Differ (e)   T U   Si Manual   Sin Do.   Sin Differ (e)   Sin Differ (e)   T U   Sin Differ (e)   Sin				2000	-	10201		-	3.4							
STD   0000   0343   2701   2152   0062911   0000   14537   797   14537   19837   14537   19837   14537   19837   1				1	100	500   22	6 056			<del></del> i						
STD   0000   0343   2701   2152   0062911   0000   14537   797   14537   14537   197			PE DEPTH (m)	7 10	s ·/	SIGMA-T		DYN. M	SOUND							
220	HR 1/10		-		-			X 10 <sup>3</sup>	7220011		pg - 6121	pg - 6171	pg - 0(/)	ид - ai/I	) g - 01/1	<u> </u>
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220	220				-		001/205	0077		-						
STD   OD50   -O070   3326   2675   O012973   O104   14445   656     220   OBS   OD51   -O069   33268   2676   14445   653     STD   O075   -O039   3344   2689   O011711   O135   14466   630     220   OBS   O077   -O036   33455   2690   14468   618     220   OBS   O102   -O003   33597   2700   14489   617     STD   O125   O021   3368   2705   O010155   O189   14505   595     STD   O150   O044   3376   2710   O009669   O214   14521   573     220   OBS   O153   O047   33772   2711   14523   571     STD   O200   O081   3393   2722   O008600   O259   14548   541     220   OBS   TO204   O083   33940   2723   14550     STD   O300   O077   3412   2737   O007143   O338   14555   501     220   OBS   TO304   O077   3412   2737   O007143   O338   14565   501     220   OBS   TO304   O077   3412   2737   O007143   O338   14565   501     220   OBS   TO304   O077   3412   2738   O006120   O404   14605   493     220   OBS   TO406   O125   34313   2750   STD   O500   O133   3445   2760   O005093   O461   14628   470     220   OBS   TO508   O134   3448   2763   O004852   O510   14643   469     STD   O600   O128   3448   2763   O004852   O510   14643   469     226   OBS   TO703   O127   3449   2764   O004774   O606   14677   469     STD   O800   O128   3449   2764   O004774   O606   14677   469     STD   O800   O128   3450   2764   O004774   O606   14677   469     STD   O800   O128   3450   2764   O004774   O606   14677   469     STD   O800   O130   3450   2764   O004774   O664   14694   471     226   OBS   TO923   O131   34501   2764   O004774   O664   14694   471     226   OBS   TO923   O131   34501   2764   O004774   O664   14694   471     226   OBS   TO923   O131   34501   2764   O004774   O664   14694   471     226   OBS   TO923   O131   34501   2764   O004774   O664   14694   471	220						0014295	0077								
220	220						0012973	0104								
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STD   0100   -0005   3359   2699   0010714   0163   14488   618		-					0011711	0135								
220	220				-		001071/	01/2								
STD   0125   0021   3368   2705   0010155   0189   14505   595     STD   0150   0044   3376   2710   0009669   0214   14521   573     220   08S   0153   0047   33772   2711   14523   571     STD   0200   0081   3393   2722   0008600   0259   14548   541     220   08S   T0204   0083   33940   2723   14550     STD   0250   0080   3402   2729   0007916   0301   14557   517     STD   0300   0077   3412   2737   0007143   0338   14565   501     220   08S   T0304   0077   34124   2738   14566   500     STD   0400   0123   3430   2749   0006120   0404   14605   493     220   08S   T0406   0125   34313   2750   14607   492     STD   0500   0133   3445   2760   0005093   0461   14628   470     220   08S   T0508   0134   34454   2761   14630   469     STD   0600   0128   34481   2763   2764   0004793   0558   14659   468     226   08S   T0703   0127   34493   2764   0004794   0654   14669   471     226   08S   T0923   0131   34501   2764   0004794   0654   14699   471	220						0010714	0163	_							
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REFERENC	SHIP				MAR	SOEN	STATION	TIME	WE A D		NATOR		DEPTH	MAX			ATIONS		EA-	CLOU				NOUC	
CODE NO	CODE	LATTIU	ł		5				YEAR	CRUISE NO.	STATIO		MOLLOR	OF S'MPL"					DE	TYPE A				TATION	
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						WAT	1	WIND	RAR	0-	MP. °C	VIS.	. ON .		SIAL										
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	MESSENC		CAR		.,   ,	*c	s °4.	SIG	MA-T	SPECIFIC VOL		₹ A O		ОИС	O2 m1/1		PO4-P	TOTA		NO2-1		)3~N	SI O4-Si	ρН	S
	HB 1/1	4 140-	TYPE	00,,,,	"	_	' ''	5.10	· · · · · ·	ANDMALY-	110'	x 10 <sup>3</sup>	. AFFC	CITY		"	0 - at/t	NB . 1	17/1	րը - գե	1 ha	- al/I	pg - al/1	ļ ,,,	c
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	20	3	085		0	082	32939	26	42					505	841										
			ST	D 0030	0	079	3311	26	56	001480	) 4	0060	14	508	813										
	20	3	085	0030	0	079	33112	26	56					508	813										
			ST	D 0050	0	070	3335		76	001297	78	0088		510	652										
	20	3	085			070	33345							510	652										
			ST			036	3347	26		001184		0119		501	666										
			ST			017	3358	26		001087	77	0147		498	670										
	20	3	OBS			017	33583		98		_			498	670										
			ST		-	037	3367	27		00103		0174		512	639										
			ST			057	3375		09	000982		0199		526	613										
			ST			092	3392	27		000874	•6	0245		553	574										
	20	3	085			093	33927 3412	27 27		000745		0286		554 578	573 562										
			ST ST			124 150	3427	27		000652		0321		600	551										
	20	2	085			151	34276			000002		0,21		601	551										
	20	2	ST			185	3440		52	000585	13	0383		634	540										
	20	2	085			186	34403		53	00000	, ,	0505		635	539										
	20	,	ST			214	3451		59	000531	7	0438		665	532										
	20	3	085			215	34513			00022		0.50		666	532										
	21	_	085			220	34548							684	528										
		-	ST			220	3455		62	000513	3	0491		685	528										
			ST			217	3456		63	000508		0542		700	526										
	21	0	OBS			217	34557		63					700	526										
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-	→ SHIP	LATTU	DF	LONGITUDE		RSOEN UARE	STATION (GM		YEAR	_	RIGINAT		4	TO	GEPTH	OB	WAVE		WEA-	CODES			NOOC	
CODE NO.	CODE	•	1/10	* *1/10	¥   10°	11.	MO DAY	HR.1/10		CRUISE NO.		TIOH	8	MOTTOM	OF S'MPL'S	OIR	HGT PE	el SE	COOL	TYPE AM	-		UMBER	
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31152	91151	7333	9N I	056090W	1 1258	36 WA		235 WINO	11969		013 IR TEMP.	∞ 1	-10	320		00	0  X	1	X1	1 2	1	- 1	0013	1
						COLOR		SPEE	O MET	0			/IS.	NO,		CIAL								
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	MESSENG	CAST	CAR		(m)	7° T	s */.	. 510	SMA-T	SPECIFIC	VOLUME	₹ ∆ OYN,	M.		סאנ	0 2 mL/i	PO4		TOTAL-P	NO2-N	NO <sub>3</sub> -N	SI O4-Si	рН	S
	HR 1/10		117	*						ANUMA	F1-T10	R 1		VELO	DCITY		n6 -	01/1	μg ~ οι/I	pg - at/1	yg - at/1	μg – at/1	, ,,,	c
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		·	st	ooo d	0 .	398	3150	25	503	0029	365	000	00	146	621	860	,	,				'	'	
	23	5	085			398	3150		503						621	860								
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	23	5	085			122	3269		520							1002								
			ST	D 002	0 (	075	3292	26	541	0016	245	004	1	14	502	810								
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			ST	D 003	0 (	080	3317	26	561	0014	345	005	6	14	509	632								
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	23	5	OBS			050	3353		592						508	632								
			ST			1600	3360		598	0010	819	014	12		504	633								
	23	5	085			0030	3360		599						504	633								
			\$1			0049	3370		705	0010		016			518	610								
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	23	>	OBS			8000	3381		713			- 2 -			532	593								
		_	S1			0099	3395		722	0008	3564	023	38		556	583								
	23	>	085			0102	3396		724	000	7721	02-			559	580								
	22	E	S1 0B3			1131	3409		732	000	1131	027	18	14	581	519								
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	23	E	S1 085			0163 0165	3428 3428		745 744	0006	7740	091	. 4		606	539								
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EHCE	T		Т		25 1	MARS	DEH	STATIO	N TIM	εT			ONGIHA	TOR'S	OEP1	H MA		w	AVE	WE	A.T	CLOUO	T	Т.	NOOS	
10.	COOE	LATTUDE	10	NGITUOE	MOCT	SOU	ARE	(G)	CTA	٠ ا	YEAR	CRUISE	51	ATIOH	TO	UEF		RSER	VATIONS	THE	2	CODES			NOOC TATION	
HO.	0001	1/10	<u> </u>	1/10	- Z	10°	1.	MO OA	/ HR.	1/10		но.	Н	UMBER	BOTTO	IM'S MC		. [н	GT PER SE	COC	DE T	TYPE AM		,	IUMBER	
529	15	72554N	05	5272w	2	58	25	08 23	14	7 1	969	WGS	014		098	0	03	3 1	L X	χ4		χ 9			0014	
							WA	TER	WB		BARG	)- <u> </u>	AIR TEM	P. °C	но		PECIAL	7								
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						-	COOF	<del></del>	_	FD#CE	(mba	, "	ULB	BULE	10000	-		4								
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	MESSENGE		RO	OEPTH 6	_,		70	5 ./		SIGM			VDLUA		2   9	оино			PO4-P	TOTAL-	., ,	102-N	NO3-N	S1 O4-S		s
	TIME HR 1/10		PE	OEFIR	m,	•		* *	٠ ا	316 M	^-'	ANDM	WFA-X10	7 UTH. 7		EFOCULA	O <sub>2</sub> ml	"	μg = e1/1	µg = at/		g - 01/1	μη - at/1	pg - ol/		2
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	24.		TO	0000			219	3004	2	240		003	900 /	0000	_	4523	912									
	147		TD	0010			36	3278	5	262	_	001	7674	0028		4525 4525	869									
	147			0010			36	3277	0	262		001	7074	002		4525	869									
	141		TD	0020			43	3300		264		001	6039	004		4533	817									
	147			0020			43	3300		264		001	005.	004.		4533	817									
	141		TD	0030			78	3319		266		001	4235	0060		4508	686									
	147			0030			78	3318		266		001		0000		4508	686									
			TD	0050			79	3334	-	267		001	3052	0088		4514	695									
	147			0050			79	3334		267			- • - •			4514	695									
			TD	0075			75	3342		268		001	2412	0119		4518	690									
	147	ОВ	S	0075			75	3342		268						4518	690									
			TO	0100	)	00	74	3355		269	2	001	1440	0149	9 1	4523	668									
	147	OB	S	0101	l	00	74	3355	5	269	2				1	4523	667	7								
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	147	08	\$	T0202	2	01	02	3397		272					1	4558	582	2								
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			TD	0400		02	04	3448		275	8	000	5395	0379	9 1	4643	524									
	153			0400				3448			_						524									
		_	TD	0500			33	3454		276			5263			4674	541									
			TD	0600			49	3458	_	276		000	5166	0485		4698	549									
	153	-		0600		_	49	3458		276		000		O.F.C.		4698	549									
		-	TD	0700			41	3458		276			5144			4711	543									
	153		TD	0800 T0800			37 37	3457 3457		276; 276;		000	5203	0588		4726 4726	538 538									
	100		7D	0900			36	3457		276		000	5245	0640		4742	534									
	153			T0951			36	3457		276		000.		5040		4751	532									
	153			0961		32	,,,,	3457		2.0.					-	4,72	504									
		50.	_	0,01				2.20	-								204									

REFERENCE	SHIP			NGITUDE 1500	MARS	DEN	STATION 1	IME	WEAR	_	DRIGIN.			DEPTH	MAX		WAVE RVATIONS	WEA-	CLDUD			NODC
CTRY ID.	CDDE	LATITUDE 1/		NGITUDE	10°		MO DAY I	49 1/10	YEAR	CRUISE NO.		TATION		BOTTON	O.E.	0.00	HGT PER SE	CODE	TYPE AM			NUMBER
											-				1				8 7			0015
311529	15	72170	1 06	1465W	259	21 (		022   WIND	1969		OZI		_	1836 NO.	<del> </del>		0   X	X1	1 0 1	'	1	0015
					į.	COLOR	_	SPEED		ER I	DRY	WET	VIS,	085.		CIAL						
						CDDE	tm) DING	FORCE	(mb	13 0	IULR	BULR		DEPTHS								
							00	500	05	0 0	16	011	6	16	-							
	MESSENGR		CARD	DEPTN (m)	Ι,	℃	5 %.	SIC.	MA-T		C VOLU		A D		UNO	O2 ml/l	PO4-P	TOTAL-P	NO <sub>2</sub> -N	NO3-N	\$104-5	рН
	TIMF NR 1/10	T NO.	TYPE	DEPIN UNI	١,		3 ′**	3107	WA-1	ANOM	ALY-X1	07	K 10 <sup>3</sup>	, AEF	OCITY	02 11101	μg = et/L	μg = ot/l	µg – al/l	µg - at/l	yg - a1/	η РΗ
	'	, ,	STD	0000	03	97	2868	22	80	005	0664	4 0	000	14	583							
	022	2 0	BS	0000	03	97	28681	22	80					14	583							
			STD	0010	-00	25	3205	25	76	002	241	6 0	037		442							
	022	2 0	BS	0010	-00		32051	25							442							
			STD	0020	-01		3304	26		001	4509	9 0	055		414							
	022	2 0	85	0020	-01		33041	26		007	206		0 4 0		414							
			STD	0030	-01		3323	26		001	296	5 0	069		402							
	022	2 (	BS	0030	-01 -01		33229 3337	26		001	185		094		402 399							
	022		STD BS	0050 0050	-01		33366	26		001	100	, ,	074		399							
	022		STD	0075	-01		3342	26		001	1420	6 0	123		401							
	022		BS	0076	-01		33420	26				•			401							
	022		STD	0100	-01		3349	26		001	090	8 0	151	14	412							
	0 2 2	2 0	BS	0101	-01		33490	26	97					14	413							
			STD	0125	-01	41	3358	27	04	001	0244	4 0	177	14	428							
			STD	0150	-01		3368	27		000	9564	4 0	202		448							
	022	2 0	BS	0151	-01		33683	27							449							
			STD	0200	-00		3387	27		000	8430	6 0	247		497							
	022	2 0	BS	0202	-00	_	33878	27			700	, ,	286		498							
			STD	0250		40	3406 3421	27			7364		∠86 321		540 576							
			STO STD	0300 0400		97 .73	3444	27			5454	-	381		629							
	022	, ,	310	T0403		.74	34442	27		000	J-4-J-	• •	201		630							
	022		STD	0500		71	3449	27	-	000	5110	0 0	434		645							
			STD	0600		67	3454	27			475		484		661							
	022	2 (	BS	T0603	01	67	34537	27	65					14	662							
			STD	0700	01	.25	3452	27	66	000	455		530		659							
			STD	0800		89	3450	27		000	442	7 0	575		659							
	022	2 (	BS	T0805		87	34499	27				_			659							
			STD	0900		63	3449	27			430		619		664							
		. ,	STD	1000		39	3448	27		000	418	8 0	661	_	670							
	022		98S STD	T1002 1100		)38 )26	34476 3448	27		000	412	6 0	703	_	670 681							
			STD	1200		120	3447	27			4000		743		690							
	022	, (	985	T1208		07	34473	27		000			. 43		691							
	022		STD	1300	-00		3448	27		000	378	2 0	782		696							
			STD	1400	-00		3448	27			351		819		700							
			STD	1500	-00	78	3448	27	74	000	321	1 0	852	14	701							
	032		85	T1505	-00	080	34479	27	74					14	701							
	032	2 (	BS	1635			34474															

IO.	SNIP	LATITU		LONGII	TUGE	S S	ARSOEN OU ARE		(G	MT)	4	EAR	CRUISE		TATION		OEPTH TO BOTTOM	MAX, DEPTH OF		WAV SERVAT	SNO	WEA- THER CODE	CLO			\$	NODC TATION UMBER	
NO.			1/10		'1/10	- 1	0° 1	* MO	0/	Y HR	1/10		NO,	, h	UMBER		00110M	S'MPL'S	OIR.	HGT P	ER SEA	2001	TYPE	AMT		IN.	UMBER	
529	15	7245	on	0570	oow	25		7 08	2		35 1		WGS	O15		$\perp$	0218		00	دا ما	d	X2	6	8			0016	
							-	-	-		SPEED	METE	) <del>-</del>			VIS.	NO. OBS.	SPEC										
							COL			OIR.	OR FORCE	(mba		ULB ULB	RULE	COOL	DEPTHS	OBSERVA	ATIONS									
							$\perp$	4		00	500	01	4 0	27	022		11	<u> </u>		<u> </u>								
	MESSENGE TIME HR 1/10	NO.	CAR		OEPTH (n	n1	т °С		s •	/a.a	SIGMA	N —₹		ALY-X1	7 0	Δ 0 14N, M χ 10 <sup>3</sup>		DCITT	02 ml/		4-P	10TAL—P pg = a1/1	NO2-		103-N g - at/i	\$1 O4~\$i yg - a1/1	рН	2
																												$\Box$
	ı	' '	ST	. '	0000	'	052	R 1	271	`	258	4	00.2	164	, 'n	000	1 14	691		ı	1			1	'		'	1.
	135		085		0000		052		269		258		002	104.	, ,	000		691										
	10.	,	ST		0010		052		27		258		002	127	3 0	021		692										
	139	,	OBS		0010		052		274		258				•			692										
			ST		0020		035	_	291		262		001	781	5 0	041		626										
	139	5	085		0020		035		291		262							626										
			ST		0030		005		32		267		001	336	3 0	057		501										
	135	5	085	,	0030		005	8 3	321	36	267	2					14	501										
			ST	D	0050		-004	6 3	34	2	268	8	001	182	1 0	082	14	458										
	135	5	085	,	0050	-	-004	6 3	34	23	268	8					14	458										
	139	5	OBS		0074	_	-0041	8 3	35(	)5	269	4					14	462										
			ST	D	0075	-	-004	8 3	35	1	269	5	001	116	3 0	111	14	463										
	139	5	OBS	,	0098	-	-004	1 3	35!	54	269	8					14	470										
			ST	D	0100	-	-003	4 3	35	7	269	9	001	073	2 0	138	14	474										
	135	5	085	,	0123		003	1 3	37	55	271	2					14	510										
			ST	D	0125		003	6 3	378	3	271	2	000	947	0	163	14	513										
	139	5	OBS		0147		008	0 3	390	01	272	D					14	538										
			ST	D	0150		008	2 3	39	1	272	0	000	875	5 0	186	14	540										
	135	5	OBS		0195		009	7 3	394	46	272	2					14	555										
			ST	D	0200		009	7 3	39	5	272	2	000	858	2 0	229	14	555										
	139	5	OBS	Т	0207		0096	6 3	394	47	272	2					14	556										

NCE	SNIP	LATITU	DE LO	NGITUOE	MAR		TATE	ION TI	ME YEAR		_	ATOR'S	$\Box$	OEPTH TO	MAX, OEPTN	OR	WAVE	NS	WEA-	CLOU			NOOC	
ID.	COOE	•	1/10	1/10	10°	1.	MO I			CRUIS NO.		TATION		ROTTOM	OF S"MPL"S		INGT PER		COOE	TYPE A			NUMBER	
						+				_	1				2 WILL 3			3EA		1		-		
529	1 15 l	72385	5N 1 05	804 W	258		08 12			9   WG:			,	0172		00	lo Ix		X2	1618	3		0017	1
						WA	1	W		RO-	AIR TEA		VIS.	NO. OBS.	SPEC									
						COLOR	TRANS.	DIR.	Or I mil	ETER 1017	ORY BULB	BULR	COOR	DEPTHS	OESERV	ATIONS								
								00		50	0.0.7	0.30	<del>  -</del>	100										
		1			т-	L	1	00	500 2	50 (	37	030	1	10			_							
	MESSENG	CAST OND.	CARD	OEPTH (m)	1	°C	S	٠/	SIGMA-T		MALY-XI	me L O	A D		UNO	02 mL/I	PO4-		DTAL-P	NO <sub>2</sub> -N		SI 04~S		S
	HR 1/10	1	IIFE	}						ANU	MAL!-4!	,	103	VEL	DCITY		µg - a	1/1	rg - e1/I	νg - at/	1/10 - gu	/10 - gu	"	C
																								T
	•		STD	0000	0	521	323	37	2559	002	2405	5 00	000	14	684		,	,			•	•		
	160	)	085	0000		521	323		2559						684									
			STD	0010		431	326	50	2587	00:	2136	7 00	23	14	651									
	160	0	085	0010	0	431	326	503	2587					14	651									
			STD	0020	0	163	329	98	2640	003	1633	6 00	142	14	542									
	16	0	085	0020	0	163	329		2640						542									
			STD	0030		017	332		2671	00	1343	6 00	156		481									
	16	0	085	0030		017	332		2671						481									
			STD	0050		070	334		2687	00	1186	4 00	082		447									
	160	)	OBS	0050		070	334	_	2687						447									
		_	STD	0075		045	339		2698	00	1087	6 0	110		464									
	160	)	OBS	0075		045	339		2698			7 0	107		464									
			STD	0100		026	336		2703	00	1038	1 0.	137		478									
	160	J	OBS	0101		025	336		2703	000	2010	2 0	1.0		479									
	3.0		STD	0125		020	337		2710	000	0969	3 0.	162		505									
	160	)	OBS	0126		022	337		2710	000	2010	0 0	185		506									
	16	2	STD OBS	0150 T0152		065 067	338		2716 2717	000	0910	0 0	-00		531 533									
	16		085	T0152		072	338		_						536									
	10	0	005	10101	U	0 /2	336	20	2717					14	220									

REFERENCE	SHIP				MAS SQU	SOEN	KT ATZ	T NC					ATORS		DEPTH	OEPTH	1	WAVE		WEA	CLO			NOOR	
CODE NO.	CODE	LATITUGE	LONGITI	Δ.						YEAR	CRUISI		HOTTATE	- 1	TO BOTTOM	0.5		HGT PE		COOR				NUMB	
CODY NO.	1 1	1/10		7/10	= 10°	1,	MO 0	A7	IR.1/10	_	1.01					1		<b>—</b>	1-		1				
31152	ا ۱۵ او	72329N	10585	55W	258					1969				$\vdash$	0245	,1	00	0  X	ı	X1	6	7 1	- 1	00	181
						WAT	-		SPEE	BAR	⊶ ⊢	AR TE	_	VIS.	NO. 085.		CIAL								
						COLOR	ZHAST Int	OIR.	OR	1-6		ORY	WET	CDDI	OEPTHS	OBSERV	ZHOITA								
						-			_		-	29	018	7	11										
								00	JSOC	)   42	0 1 0	29		1	1 4 4			_	-		1	1		_	
	MESSENG		ARO O	EPTN (m)		€	5 '	<b>/</b>	210	T-AM	SPECIFI	C VOLU	07	A. ₽		DCITY	02 mt/l	PO <sub>4</sub>		TOTAL-P					PN C
	HB 1/10	7 110.	TPE											t 10 <sup>3</sup>	7220			100-1		<b>98 - 4171</b>	79-00	. 199-00	. , ,,,	-	
																							1		- []
	•	· ' s	STO (	0000	0	567	325	2	25	66	002	343	4 0	000		705									
	18			0000	0	567	325	17	25	66						705									
		5	STD (	0010		557	325			69	002	310	0 0	023		703									
	183	2 08		0010		557	325			69						703									
				020		125	330			50	001	537	9 0	043		526									
	18:		-	020		125	330			50						526					•				
				0030	_	003	332			69	001	359	1 0	057		475 470									
	18		_	0031		007	332			71	001	102	2 0	000		429									
				0050		108	333 333			86 88	001	192	9 0	083		427									
	18			0052		113 082	335			96	001	100	s 0	111		447									
	18:	-		0077		078	335			97	001	100	5 0	-11		449									
	10,			100		027	336	_		705	001	015	3 0	138	_	478									
	18:			0102		022	336			706						481									
	10.			125		046	338			715	000	922	6 0	162		518									
	18			128		053	338			716					14	522									
				150		089	339			721	000	864	7 0	184	14	543									
	18			0154	0	095	339	45	27	722					14	547									
			STD (	0000	0	148	340	8	27	729	000	792	4 0	226		580									
	18	2 08	35 T	0000	0	148	340			729						580									
	18:	2 08	BS TO	237	0	158	340	94	27	730					14	591									

										_					1									7
REFERENCE	SHIP	LATITUO		NGITUOE	# MAR	SOEN	NOTATZ		YEAR		RIGINA			GEPTN TO	DEPTH	08	WAVE		WEA-	CLOUD		١.	NOOC	
CODE NO.	COOE		1/10	1/16	SQU SQU		YAD OM		IEAR	CRUISE NO.		LATION		BOTTON	A S'MPL"		HGT PI		COOF	TYPE AM			NUMBER	
1	1		17.10	1/10						1 100										1 1				1
311529	115 l	72280	9480W	258		08 24		1969	WGS			إلى	0420	<u> </u>	00	lo Ix	1	X1	67	1		0019	ı	
						WAT		WIND	BAR	o-	IR TEM		vts.	.ON .280		CIAL								
						COLON	TRANS OI	R. OR	1 77.5		JLB	WET	CODE	DEPTHS	OBSERV	ATIONS								
						-	3:	1		1 0	25	012	7	13	1									
				1		1	1 13	2   30 :	103	1 10.	25			13.			_				1		T	77
	MESSENGE	E NO.	TYPE	OEPTH (m	1 1	₹0	s %.	. 510	T-AM	SPECIFIC	VOLUA	7 0	M. M.		OCITY	02 ml/1		4-P	TOTAL-P	NO2-N	NO3-N			o c
	NB 1/10		TIPE	1									2 10 <sup>3</sup>	AFF	OCIII		λű .	61/1	∧to - ga	μg - ot/l	yg - at/1	µg - at/		G
																		- 1						-11
	•		STD	0000	0	563	3157	24	92	003	0469	0 0	000	14	690									
	213	3	OBS	0000	0	563	31574	4 24	92					14	690									
			STD	0010	0	132	3238	25	95	002	0654	· 0	026		518									
	21:	3	085	0010		132	32384		95						518									
			STD	0020		099	3321		73	001	3248	3 0	043		426									
	213	3	085	0020		099	3321:		73						426									
			STD	0030		146	3330		81	001	2438	3 0	055		406									
	213	3	085	0031		149	3330	-	82		1766				405									
	22.6		STD	0050		168	3338 33388		88	001	1/55	, 0	080		400									
	213	•	O8S STD	0051 0075		169 168	3343		89 92	001	1262		108		405									
	21:		085	0075		167	3343		93	001	1993	, 0	100		406									
	21.	,	STD	0100		134	3347		95	001	1123	8 0	137		426									
	21:	3	085	0102		131	3347		95						428									
			STO	0125		096	3364		707	000	9936	. 0	163		450									
	21:	3	085	0127	-0	091	33659	5 27	708	_				14	453									
			STD	0150	-0	020	3377	27	714	000	9258	3 0	187	14	491									
	21:	3	085	T0151	-0	017	3378	0 27	715					14	493									
			STD	0200		109	3404		729	000	7949	0	230		562									
	213 085			T0204		117	3406		730						567									
			STD	0250		183	3426		741	000			267		606									
			STD	0300	0	235	3442		750	000	6078	3 0	299	14	640									
	21:	3	085	T0301		236	3442		750						640									
			STD	0400		273	3455		757	000	5499	9 0	357		674									
	21:		085	T0405		275	3455		757						676									
	21:	3	085	0415	0	275	34556	5 27	758					14	678									

REFE	RENCE	SHIP		-	MARSDEN	STATION TI		ORIGINA	ATOR'S	DEPTH MA		WAVE		WEA		OUD			NODC
TRY	ID.	CODE	LATITUDE 1/10	LONGITUDE 17/10	SOUARE 10" 1"	MO DAY H	YEAR		TATION UMBER	BOTTOM S'MP	F U	HGT PER		THER		DES	1		UMBER
31	1529	15		060450W	259 20	08 24 2	34 1969	WGS 019		0610	00	0 x		X8	6	6			0020
					COLO		SPEED MET		WET CODE	OBY Deck	PECIAL RVATIONS								
					CODE	(m) DIR,	OR (mb		BULB	DEPTHS 003E									
				-		01	504 06	1 016	007 7	14								1-	
		MESSENGR TIME O		DEPTH (m)	7 %	s */	SIGM A-T	SPECIFIC VOLUM		VELOCITY SOUND	02 mi/	FO <sub>4</sub> -		OTAL-P	NO:		NO3-N ug - ot/1	\$1 O4\$1 yg = at/1	рН
													$\top$						
			ST	0000	0418	2881	2288	004988	0000	14593			·			ľ			
		234		0000	0418	28808 3199	2288 2559	002404	0037	14593 14542									
		234	ST . 085	0010	0198 0198	31994	2559	002404	1 0037	14542									
		234	ST		0012	3299	2650	0015363	0057	14474									
		234		0020	0012	32994	2650			14474									
			ST		-0105	3323	2674	0013070	0071	14425									
		234	OBS ST	0030	-0105 -0161	33233 3336	2674 2686	0011941	0096	14425 14403									
		234		0050	-0161	33358	2686	001174	. 0070	14403									
		234	ST		-0160	3340	2690	0011603	0125	14409									
		234		0076	-0160	33407	2690			14409									
			ST		-0122	3349	2696	001100	7 0154	14432									
		234		0101	-0120	33500	2697		0100	14433									
		234	ST: 08S	0125 0126	-0040 -0037	3366 33670	2707 2707	0010011	0180	14477 14478									
		234	ST		0004	3379	2715	0009225	0204	14503									
		234		0151	0006	33794	2715	000/202	0-04	14504									
			ST		0083	3401	2728	0008000	0247	14550									
				70202	0087	34020	2729			14552									
		234		T0203	0081	34020													
		234	08s ST(	0250	0111	3416	2739	0007062		14573									
			ST(	0250	0111 0136	3416 3429	2739 2747	0007062		14594									
		234	STI STI OBS	0250 0300 T0300	0111 0136 0136	3416 3429 34291	2739 2747 2747	0006260	0318	14594 14594									
		234	STI STI OBS STI	0250 0300 0300 0300 0400	0111 0136 0136 0181	3416 3429 34291 3446	2739 2747 2747 2758		0318	14594 14594 14633									
			ST( ST) OBS ST) OBS	0 0250 0 0300 T0300 0 0400 T0404	0111 0136 0136 0181 0182	3416 3429 34291 3446 34470	2739 2747 2747 2758 2758	0006260	0318	14594 14594 14633 14634									
		234 234	ST( ST) OBS ST( OBS ST)	0 0250 0 0300 T0300 0 0400 T0404 0 0500	0111 0136 0136 0181 0182 0181	3416 3429 34291 3446 34470 3451	2739 2747 2747 2758 2758 2762	0006260	0318	14594 14594 14633 14634 14650									
		234	ST( ST) OBS ST( OBS ST)	0 0250 0 0300 T0300 0 0400 T0404 0 0500 T0501	0111 0136 0136 0181 0182	3416 3429 34291 3446 34470	2739 2747 2747 2758 2758	0006260	0318 0376 0428	14594 14594 14633 14634									

REFE	RENCE	SNIP				-=	MAR	SOEN	STAT	ION TE	ME		ORIGIN	ATOR'S		DEPTH	MA) DEPT		WAVE	WEA-	CLOUD			NOOC	
TRY	ID.	CODE	LATITU		LONG	10 7				GMTI		YEAR		TATION		TO MOTTO8	OF	1	ERVATIONS	THER	COOES		5	TATION	
ODE.	NO.			1/10		1/10 =	10°	1,	MO (	H YAC	21/10		NO.	UMBER		-0.10M	S*MPL	'S DIR	HGT PER SE	1000	TYPE AMI			J1410EK	
31	1529	<sub>15</sub>	7211	ON	0624	450W	259					969	WGS 02			2110		00	0 x l	X7	6 8			0021	
								WAI	-	_	IND	BARC	AIR TE	MP. °C	vis.	NO.	SP	ECIAL							
								COLOR	TRANS.	DIR.	SPEED	METE (mbs		WET BULB	CODE	OBS. OEPTHS	OBSER	VATIONS							
								CODE	1		FORCE	<del> </del>	_		+										
										99	506	059	9 018	014	7	17									
		MESSENGI		CARE		DEPTH (m)	1 ,	°C	,	٠/	SIGMA	4-7	SPECIFIC VOLU		0 0		JNO	010	PO4-P	TOTAL-P	NO2-N	NO3-N	5104-51		\$
		TIME HR 1/10		TYPE		OCT IN SHIP	1 '		1	***	SIGMI	^-'	ANOMALT-XI	0,	YN. M. X 10 <sup>3</sup>	VELC	CITY	O 2 ml/1	1\1a + gu	μg = α1/l	νg - οl/l	yg - at/l	µg - ot/	pН	C
			1						1		1														+
			3	CT	n !	0000	1	001	246		198	1	007935	ا د ۱	000	14:	251	l.	1 1	'	- 1		l	ı	1
		05	,	ST OBS		0000		001	246		198		001933	0 0	000		351								
		05	1	ST		0010		076	321		258	_	002124	0 0	050		420								
		05	7	OBS		0010	_	076	321		258		002124	0 0	0,0		420								
		0,5	•	ST		0020		153	330		265		001470	8 0	068		397								
		05	7	OBS		0020		153	330		265		001.10	_ 0	- 00		397								
				ST		0030		149	332		267		001288	3 0	082		404								
		05	7	OBS		0030		149	332		267						404								
				ST		0050		173	333	36	268		001189	7 0	107		398								
		05	7	OBS		0050	-0	173	333	160	268	7				143	398								
				ST	D	0075	-0	175	334	-2	269	1	001142	9 0	136	144	402								
		0.57	7	OBS		0076	-0	175	334		269					144	402								
				ST		0100		160	334		269		001089	6 0	164	144									
		057	7	085		0101		159	334		269						415								
				ST		0125		150	335		270		001029		190	144									
				ST		0150		140	336		270		000969	7 0	215	144									
		057	7	OBS		0152		139	336		271				2 - 0	144									
		0.55		STI	U	0200		35	338		271		000879	3 0	262	144									
		057	1	OBS		0202		031	338		271		000766	2 ^	303	144									
				ST		0300		036 092	340		273		000764		339	145									
				STI		0400		163	344		275	_	000559		401	146									
		057	,	OBS		0400		165	344	_	275		0000099	9 0	+01	146									
		05		STI		0500		159	344		275		000545	n 0	456	146									
				ST		0600		142	344		276		000519		509	146									
		057	7	OBS		10604		141	344		276		200217		- 0 )	146									
		00		ST		0700		105	344		276		000468	8 0	559	146									
				STI		0800		773	344		276		000437	_	604	146									
		057	7	OBS		0805		072	344		276					146									
				ST		0900		051	344		276		000427	5 0	647	146									
				ST		1000		032	344	_	276	_	000420	_	690	146									
		057	7	085	T	1006	0.0	031	344		276					146									
				ST		1100		018	344		276		000408	4 0	731	146									
				STI		1200		005	344		277		000396		771	146									
		057	7	085	1	1211	0.0	004	344	74	277	0				146									
				ST	0	1300	-00	800	344	7	277	1	000384	5 0	810	146	599								
				ST	0	1400	-00	020	344	7	277	1	000374	4 0	848	147	711								
				ST		1500		029	344		277	2	000366	2 0	885	147	724								
		066	ó	OBS	T	1510	-00	030	344		277					147									
				STI	D	1750	-00	036	344	9	277	3	000343	2 0	974	147	763								
				ST	D	2000	-00	042	344	9	277	4	000333	7 1	058	148	303								
		066		085		72018		042	344		277					148									
		066	ò	OBS	1	72120	-00	040	344	90	277	3				148	325								

FERENCE NO.	SNIP	LATI	TUOE 1	ONGITUOE	MARSDEN SQUARE	STAT (	ON TI	Y	EAR C	ORIGII RUISE NO.	STATIC NUMB	DN .	OEPTN TO BOTTON	DEPTI OF S'MPL	OBS	WAVE ERVATIONS HGT PER S		ER C	LOUD		5	NOOC TATION IUMBER
1150	0 16	720		63300W	259 23				969	wgs 02			2200	-	00	o x	x		8			0022
1152	91 15	1 720	50N 0	63300W1	1259 123 WA	TER		IND IT	BARO-		MP. Y	:	NO.	ļ	ECIAL	10 12 1	1 ^	210	9 ' 6 '		ı	0022
					COLOR	TRANS.	DIR.	SPEED OR FORCE	METER (mbs)	ORY BULB	BUL	.8	Anc.		VATIONS							
					l	<u> </u>	34	508	045	009	-00		17_	<u></u>		,						
	MESSEN TIME HR 1/	GR CAS	T CARO	DEPTH (m)	r °C	s	•/	SIGMA	A-T S	PECIFIC VOL	UME 19 <sup>7</sup>	₹ △ b DYN. M 1103	. SO VEL	OCITY	02 ml/l	PO4-P ug = 01/1	TOTAL pg - st		02-N - 01/I	NO3-N pg - 01/l	\$1 O4\$1 µg = a1/1	
						1			_		_	0000		. 05					- 1			
	0.0		ST0 085	0000	0800	259		208		006964	+ /	0000		405 405								
	09	75	STD		-0051	323		259		002039	7	0045		434								
	09	5	085	0010	-0051	323		259		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•			434								
	•	, ,	STO		-0154	328		264		001560	5	0063		395								
	09	95	085	0020	-0154	328	86	264	8				14	395								
			STO	0030	-0165	330		266	5	001398	9	0078		394								
	0.9	95	085	0030	-0165	330		266						394								
			STD		-0174	333		268		001239	4	0104		396								
	0.9	95	085	0050	-0174	332		268						396								
	0.0		STO	00 <b>7</b> 5 00 <b>7</b> 5	-0176 -0176	333		268		001162	6	0134		401 401								
	09	45	0BS ST0		-0170	334		269		001123	B	0163		401								
	0.9	25	085	0100	-0170	334		269		001123		0100		409								
	0 ;	,,	STD		-0161	335		270		001049	14	0190		419								
			STD	_	-0151	336		270		000982		0215		428								
	0.9	95	085	0150	-0151	336		270						428								
		-	STO		-0053	338		271		000877	8	0262		485								
	0.9	95	OBS	0200	-0053	338	11	271	9				14	485								
			STD	0250	0018	340	0	273	1 (	000769	1	0303	14	529								
			STD		0076	341		274		000690		0340		565								
			STD		0152	343	-	275		000573	8	0403		619								
	0.9	95	085	T0402	0153	343		275		<b></b>		_,		620								
			STO		0150	344		275		000530		0458		635								
	0.0		STD	0600 T0603	0146 0146	345		276		000488	1	0509		651 652								
	09	70	085 STD		0113	344		276		000467	· a	0557		653								
			STD		0083	344		276		000457	-	0603		656								
	09	95	085	T0806	0081	344		276		000.52		0-03		656								
			STD		0056	344		276		000439	8	0647		661								
			STD		0036	344	6	276	7	000431	8	0691	14	668								
	0.9	95	085	T1010	0034	344	58	276						669								
			STD		0024	344		276	-	000425	_	0734		680								
			STD		0012	344		276		000416	6	0776		691								
	0.9	95	085	T1206	0011	344		276			_			692								
			STD		-0000	344		276		000401 000390		0817		703 714								
			5T0 5T0		-0012 -0025	344		277		000378		0895		725								
	1.0	) 4	085	T1504	-0025	344	-	277		000576	,	0090		726								
	10	-	STD		-0023	344		277		000362	0	0988		765								
			STD		-0031	344		277		000352		1077		805								
	10	)4	085	T2008	-0038	344		277						806								
		)4	085	T2193	-0039	344		277						838								

REFERENCE	SHIP	LATITUD		ONGITUDE	W CTR	ARSOEN OU ARE	STA	TION 1	IME	YEAR		ORIGII			I	DEPTH	MAX.	OR	W A SERV	VE A TIONS	WEA-	CLOUD			NODC STATION	
CODE NO.	CODE		1/10	1/10	18 위	)°   1°			HK.1/10	T,CA			MUN		_ 1	MOTTOR	OF S'MPL'			PER SE	2000	TYPE AM			NUMBER	
311529	15	72315		63595W	25		08	25	140	1969	ועו	GS 02	, 3		1	2220		36	0	2	X7	6 8			0023	
. 311329	" 15 '	12313	N O	OJJYJW	1 123	WA	TER	1	WINO	RAT		AIR TE	MP.	— ·	/IS.	NO.	SPE	CIAL	]	`					***	
						COLO	TRANS	DIR	SPEED			ORY BULB	RU	T CC	200	OBS. DEPTHS	ORSERV	ATIONS								
							+	36	-	•	$\rightarrow$	015	01	0 7	,	17										
	MESSENGR				$\overline{}$		+		1211	103	Υ .		1		_	T .			Τ.							7,
	TIME	OI NO.	TYPE	DEPTH (	im t	7 10	5	*/	SIG	MA-T	AA	CIFIC VOL	107	₹ ∆ NYO. X IX	M.		JND DCITY	O 2 ml/i		PO4-P g - 01/1	10TAL-P #0 - 01/3	NO2-N yg - al/l	NO3-N yg - at/l	\$1 O4- ug - al		c
	HR 1/10	1		+	$\rightarrow$		+		+-		+				_	+			+							+
	ı	1 1	STD	0000	` '	0256	27	96	22	33	1 01	05510	15	000	00	144	512 <sup>[</sup>		- 1	F				1	1	1 '
	140	)	085	0000		0256		959		33	•	,,,,,		•••			512									
			STD	0010	) -	0083	32		25	84	00	02167	0	003	8		416									
	140		085	0010		0083	-	122		84							416									
	140	)	085	0019		0122		560		21	0.0	0170/		00 5			405									
	140	,	STD OBS	0029		0127	32	59 818		43	Ü	01794	-0	005	,0		404 391									
	140	,	STD	003		0169	32			44	0.0	01591	. 7	007	15		389									
	140	)	085	0048		0222		181		73							372									
			STD	0050		0215	33			74	00	01304	4	010	4		375									
	140	)	OBS	0072		0167	-	333		84		107					404									
	1/0		STD OBS	0075		0167	33	35 439		86 93	00	01197	1	013	0	144	411									
	140	J	STD	0100		0162	33			94	0.0	01119	8	016	4	144										
			STD	0125		0155	33			02		01043		019		144										
	140	)	085	0145		0149		625		8 0							429									
			STD	0150		0140	33			08	00	00977	13	021	.7	-	434									
	140	)	OBS STD	0192		0067	33	798 82		19 21	0.0	00862	20	026	. 3	144	477 484									
			STO	0250		0008	34			32		00763		030			524									
			STD	0300		0063	34	15		41	00	00682	24	033	9	14	559									
	140	)	085	0384			-	349																		
			STD	0400		0143	34			54		00566		040		140	-									
	140	,	STD 08S	0500 10576		0185	34	555		60	00	00514	1	045	0		652 668									
	140	,	STD	0600		0180	34			65	0.0	00476	2	050	15		667									
			STD	0700		0134	34			67		00455		055			663									
	140	)	085	T077		0104		518		68							662									
			STD	080		0095	34			68	-	00440	_	059			662									
	140		STD 085	0900 T0970		0064	34	49 483		68	U	00431	. 2	064	·U	146	668									
	140	,	STD	100/		0040	34			69	0.0	00413	13	068	13	146										
			STD	1100		0025	34			70		00400		072		146										
	140	)	085	7117		0014		497		71							688									
			STD	1200		0010	34			72	-	00383	-	076	_	146										
			STD	1300		0004	34 34			72	-	00376 00369	-	080	-	14	701 713									
	150	)	085	T146		0022		481		72	0(	00009	,	000	0		720									
	-200		STD	1500		0024	34			72	00	00363	8	087	4		726									
			STD	1750		0034	34	48		73	00	00349	2	096	3		764									
	150	)	OBS	T195		0038		487		73							798									
	150	)	STD	2000		0038	34			73	00	00337	1	104	9		B05									
	150	,	085	T217	-	0039	24	493	21	74						148	835									

RENCE	SHIP			E 5	MAR	DEN	ITATZ	ON TIM				DRIGINA	ATOR'S		DEPTH	MAR		WAVE		WEA		Τ		NODC	
10. HO.	3000	LATITU	1/10	NGITUOE	10*		MO TO	SMTI		YEAR	CRUISE NO.	51	UMBER	٦,	OT MOTTO	0.0	- 0	SERVA TI		THER	COOES	1	1 9	TATION	
								$\neg$						-		3 MFL		HGT PE			TITPE AM	T			
1529	15	7257	ON 1 06	54285W	1259	24 WA		5   19		969		O24		- 12	100	<u> </u>	1.00	lo Ix	1	I X7	6 8	I	- 1	0024	
						COLOR	TRANS.		SPEED	METE	R	ORY	WET	VIS.	NO. OBS.	CRSER!	ECIAL VATIONS								
						CODE	(m)		FORCE	(mbs	I B	UL8	BUTB		DEPTHS										
								34 5	15	034	4 0	16	015	7	17										
	MESSENGR	CAST	CARD	DEPTH (m)	,	*C	5	.,	SIGMA		SPECIFIC	. VOLUA	AE E	A. M.	soı	JND		PO4	-P TO	OTA L-P	NO <sub>2</sub> -N	NO <sub>3</sub> -N	SI 04-Si		s
	HR 1/10	T NO.	TYPE	DEFIN (m)	'	C	,	**	21GM/		ANOM.	ALY-X10	7 DY	103		CITY	02 ml/	PB -		/g - al/l	μg + αt/t	ug - at/1	/ום - פע	pH	C
				1																					$^{\dagger}$
			STD	0000	0.	223	298	8	238	9 '	004	0288	3 00	00	14	523 ′		'	'		1		1	1	1.
	190		085	0000	0	223	298	78	238	9						523									
			STD	0010	-	057	324		260		001	9510	00	30		432									
	190		085	0010		057	324		260							432									
	190		STD 085	0020 0020		151 151	329 329		265		001	4836	00	47		398 398									
	190		085	0020		168	332		267							398 395									
	1,0		STD	0030		168	332		267		001	2768	00	61		395									
			STD	0050		173	334	-	269	_		1490		85		398									
	190		085	0050	-0	173	334		269	1					143	398									
	190		085	0070		176	334		269						14										
			STD	0075		176	334		269		001	1027	01	13		402									
	190		085	0098 0100	-0		335	_	2691	-	001	0706	0.1		14										
			STD	0125		175 162	335 335		269			0704 0184				407 419									
	190		085	0147		150	336		271		0010	0104	01	0,		129									
	1,0		STD	0150		144	336		2710		000	9607	01	91	144										
	190		OBS	0196		056	338		272					-	144										
			STD	0200	-00	53	338	3	272	1	0008	8635	02	37	144	486									
			STD	0250	-00		340		2736		000				145										
			STD	0300	00	131	342	_	274	7	0000	6174	03	10	145	46									
	190		OBS STD	0389 0400	0.1	115	344		2763	2	000	. 702	03	. =		. 04									
			STD	0500		199	345		276		0004				146										
	190		085	T0584		270	346		276		000	,,,,,		12	14										
			STD	0600		252	346		276		0004	4821	04	59	14										
			STD	0700		157	345		2761		0004	4449	05	05	146										
	190		085	0778		104	345		276						146										
			STD	0800 0900		98 971	345		2769 2768		0004				146										
	190		085	10979		)53	344		2768		0004	4294	05	92	146										
	170		STD	1000		149	344	-	2768		0004	4273	06	34	146										
			STD	1100		31	3441	_	2769		0004		06		146										
	190		085	T1187	00	17	344	75	2769	9					146	92									
			STD	1200		15	3441		2770		0004		07		146										
			STD	1300	-00		3441		2770		0003		07		147										
	199		STD 08S	1400 T1417	-00		344		2771 2771		0003	3//0	07	95	147										
	199		STD	1500	-00		3441		2111 2772		0003	3620	98	22	147										
			STD	1750	-00		3441		2773		0003		09.		147										
	199		085	T1932	-00		3441		2773		,,,,,		•		147										
			STD	2000	-00																				
	199		085	T2078	-00	140																			

REFERENCE	SHIP	LATITUD		NGITUDE	MAR!	DEN	STATION T	IME	YEAR	_	DRIGIN			DEPTH	DEFII	d OB	WA	VE ATIDNS	WE		DES		Π,	NODC	
COOE NO.	COOE . 1/10			17/10	NOC SOU		MO DAY		1671	CRUISE NO.	1 5	STATIO 8MUM	ER	BOTTON	S'MPL	*S Dift			200	e l	AMI			NUMBER	
311529	15	73245	N OF	54580W	259	34	08 25	237	1969	WGS	02	5		2185		00	0	x	×ε	6	9			0025	
311727	- 10 -	13243				WAT	ER 1	SPEED	BARG	0	AIR TE	_	V15.	ND. ORS.	SPI	ECIAL									
						COLDR	TRANS DIR.	OR			DRY IULB	BUL		DEPTHS	DBSER	VATIDNS									
							34	506	59	0 0	31	02	5 7	17	1		1								
	MESSENG	CAST	CARD			₹	5 %.		MA-T	SPECIFIC	C VOLU	ME	₹ △ D	so	UND	D <sub>2</sub> ml/	,	PO4-P	TOTAL-	NO <sub>2</sub>	-N	ND3~N	SID4-S		2
	HR 1/10	CAST OF NO.	TYPE	DEPTH (m	'   '	C	, ,,,,	3107	ma-1	ANOM	ALY-X1	107	₹ △ D DYN. M X 10 <sup>3</sup>	. VEL	DCITY	D2 1117	'   "	rg = a1/1	µg + 01/	µg ∸	a1/I	µg - ot/1	yg - at/	l pH	č
																									H
	•		STD	0000		261	3015	24		003	847	8	0000		543										
	23	7	OBS STD	0000		261 048	30150 3246	24 26		001	916	7	0029		543 437										
	23	7	085	0010		048	32464	26		001	,10	•	002)		437										
			STO	0020		138	3309	26	64	001	407	8	0045		405										
	23	7	OBS	0021		143	33132	26		001	24.2	2	0059		404										
	23	7	STD OBS	0030		152 153	3330 33317	26 26		001	242	,	0059		403										
	2)	•	STD	0050		168	3342	26		001	144	8	0083		401										
	23	7	OBS	0052		169	33425	26							401										
	22.	7	STO OBS	0075 0078		166 165	3347 33480	26 26		001	105	1	0111		407										
	23	′	STD	0100		161	3354	27		001	051	0	0138		414										
	23	7	OBS	0104		158	33554	27							416										
			STD	0125		126	3364	27			983		0163		436										
	23	7	STD	0150 0155		071 058	3375 33775	27 27		000	918	3	0187		468										
	23	′	STD	0200		103	3402	27		000	806	0	0230		559										
	23	7	OBS	0207	0	125	34048	27	29						571										
			STO	0250		130	3415	27			726		0268		581										
			STD	0300		135 146	3426 3442	27 27			648 539		0362		617										
	23	7	OBS	0415	·	140	34442		- 1	000	,	•	0-02	•	01.										
			STD	0500		157	3451	27			483		0413		640										
	23	7	STD	0600 T0622		168 170	3455 34553	27 27		000	465	5	0461		662										
	23	,	STD	0700		141	3454	27		000	453	6	0507		666										
			510	0800		106	3452	27		000	441	7	0551		667										
	23	7	OBS STD	0832 0900		095 072	34516 3450	27 27		000	427	2	0595		668										
			STO	1000		043	3449	27			417		0637		672										
	23	7	OBS	T1040		034	34480	27	69					14	675										
			STO	1100		025	3448	27			408		0678		681										
	23	7	STD OBS	1200 T1248		011 005	3448 34480	27 27		000	396	4	0718		691 697										
	23	'	STD	1300		001	3448	27		000	384	5	0757		703										
			STD	1400	-0	012	3449	27	72	000	371	9	0795	14	714										
	2.		STD	1500		024	3449	27		000	358	8	0832		726										
	244	4	OBS STD	T1503		024 033	34488 3449	27		000	342	9	0920		727 765										
			STD	2000	-0	042	3450	27			326		1003		804										
	244		OBS	T2009		042	34500	27							805										
	244	4	OBS	T2162	-00	039	34500	27	74					14	833										

		-,-																								
ERENCE	SHI	LATIT	1105	LONGITU	. 5	M.A.	RSOEN UARE	STA	TION TI	ME			ORIGIN	ATOR'	'5	OEPTH	MA	1	WAVE		WEA-	CLOUD			NOOC	
10. E NO.	coc	E   17.11	1/10		DE 120	10*	1			- 1	YEAR	CRUIT	SE S	TATIO	N	TO	OEPT	0"	SERVA TI		THER	COOES			STATION I	
+	+	_				10-	1 1	wo	OAY H	.1/10		1 10	/	MUMB	ER		S'MPL	'S DIR	HGT PE	R SEA	COOE	TYPE AM			NUMBER	
1152	9 1 1 5	17348	37N	06529	5 W	1259				43 1	969	WG				2195		00	0 x		Х2	6 8		i	0026	
							WA	_	_	INO	BAR	0	AIR TEA	MP. 70	VIE	NO.	50	ECIAL							0020	
							COLOR	TRANS	OIR.	SPEED	T3 AA dm)		ORY RUL8	BUL.	CODE	OBS. OEPTHS	COTTO	VATIONS								
							-	-		FORCE	-	-			$\rightarrow$		-									
								Ļ	22	S10	05	9	029	02	0 7	17										
	MESSE	NGR CAST	CAR		TH (m)		7 °C	,	٠/	SIGM	A - T		IIC VOLU	3,M	₹ A D OYN. M.	so	UNO		PO4	-P   to	TAL-P	NO2-N	NO3~N	5104-5	,]	5
	HR 1		TYP	E.		1	_			3.0		AND	MALY-XI	٥'	X 103	VEL	OCITY	O2 ml/	μg -		+ of/l	yg - al/1	1/10 - BH	yg - al/		c
																1			+-	-	-				-	+
	'		' ST	າ ດ	000	່ ດ	338	30	40	242	0	00.	3646	1 .	0000	1 4	581	827	1	١	- 1	- 1			1	11
	0	43	OBS		000		338		493	242		00.	3040	1	0000		581	827								
			ST		10		052	32		262		0.0	1768	2	0027			1041								
	0	43	085		10		052		656	262		-	1.00.	_	0021			1041								
			ST	0 0	20		102	33.		267		00	13216	5 1	0043		424	970								
	0	43	OBS		20		102		216	267					+5		424	970								
			ST		30		161	33:		268		00	1190	1 (	0055		400	818								
	0	43	OBS	0.0	30		161		365	268							400	818								
			ST	D 00	150	-0	165	334	48	269	6	001	1101	7 (	0078		403	803								
	0	43	OBS	0.0	50	-0	165	334	477	269							403	803								
			ST	D 00	75	-0	174	339	52	270	-	001	10655	5 (	0105		404	798								
	0	43	OBS	0.0	175	-0	174	339	519	270	0						404	798								
			ST	D 01	.00	-0	158	339		270		001	10303	3 (	0131		416	791								
	0	43	OBS	01	00	-0	158	339	568	270	3						416	791								
			ST	D 01	25	-0	128	336	54	270	8	000	9826	5 (	0156		435	744								
			ST	D 01	50	-0	087	33	74	271	5		9226		0180		460	704								
	0	43	OBS	01	50	-0	087	337	736	271	5						460	704								
			ST		00	0	024	339	97	272	8	000	7988	3 (	0223	14		649								
	0	43	OBS	0.2	00	0	024	339	966	272	8						523	649								
			ST	0 02	50	0	063	341	11	273	7	000	7129	5 (	261	149		629								
			ST		00	0	095	342	23	274	5	000	06431	. (	295	145	575	611								
			ST		00	0	135	344	+1	275	7	000	5389	) (	354	146	512	582								
	0	43	OBS			0	135	344	+09	275	7					146	512	582								
			ST		00		133	344	+7	276	2	000	)494]	. (	0406	146	529	564								
			ST		00	0	122	345	0	276	5	000	4661	. (	)454	146	41	548								
	0 4	43	OBS	T06	-		122	344		276	_					146		548								
			ST	-			096	345	-	276			)4497		500	146	46	534								
	0		ST		00		073	344	-	276		000	)4359	0	)544	146		520								
	04	+ 5	OBS	T08			072	344		276						146		520								
			STI				054	344	-	276			4306		587	146		515								
	0.4		STI				035	344		2769		000	4162	C	0629	146		510								
	0 4	13	OBS	T10			35	344		2769						146		510								
			STI				21	344		2769			4093		671	146		471								
	04	. 7	OBS	0 12 T12			009	344		2770		000	4014	0	711	146		441								
	04		STO				800	344		2770						146		439								
			STO				003	344	-	2771			3896		751	147		427								
			STO				002	344		2771			3847	-	790	147		415								
	0 9	. 1	OBS		-	-00	100	344		2771	L	000	3797	0	828	147	34	402								
	0 :	, 1	STE	15 17		-00	110	344	_	222	,	000	2000	_				402								
	0.5	. 1	OBS	_		-00	119	344		2772	_	000	3616	0	920	147	71	366								
	0 2	1	ST	19 20		-00	121	344		2770		000	2/20	_	000			344								
	0 5	1	OBS	7 20 T21		-00	-	344		2773		000	3439	1	009	148		344								
	-	_	303	121	ری	-00	139	345	00	2774	4					148	33	337								

REFERENCE	4.7/711.D.C	- E	MARSOEN SOUARE	STATION T			ORIGINA			DEPTH	MAX. DEPTH	CASS	WAVE ERVATIONS	WEA-				NODC	
COOR ND. CDDE		. 07_		MD DAY H		CRUISI		TATION		TQ EOTTOM	OF S'MPL'S	2031	HGT PER S	CDDS		1		STATION	
																1			
311529 15 7	3555N 0	64150W1 12	59 34 WA		080   19	69 WGS	O27		T-1	0850 No.	L		1 2	X2	6 8	1	1	0027	1
			COLOR			METER -	DRY	WET	COD	J 085.	ORSERV	ATIONS							
			COOE	(m) DIR.	FORCE	(mbs)	RULR	EULS		DEPTHS									
				22	505	079 0	28	018	7	15									
MESSENGE	AST CARD	DEPTH (m)	r °c	s */.	SIGMA		C VOLUA	42 X	Δ O	sou		O2 ml/1	PO4-P	TOTAL-P	NO2-N	NO3-N	5104-	Si	s
TIME OF 1	NO. TYPE	DEFIN ON			310 m A	- ANOA	ALY-X10	"   "	10 <sup>3</sup>	, AEFO	CITY	O3 mt/1	yg = 01/1	µg + p1/1	μg - αI/I	μg = a1/1	µg − at.		è
								$\neg$											1
' '	STD	0000	0266	3001	2396	003	9569	9 0	000	149	544	854	'	•	,			•	
080	OBS	0000	0266	30011	2396					145		854							
	STD		-0018	3289	2644		5995	0	028		57								
080	OBS	_	-0018	32894	2644		2076				57								
080	STD OBS		-0106 -0106	3323 33233	2675 2675		3073	, 0	042	144		949 949							
000	STD		-0130	3324	2676		2957	7 0	055	144		848							
080	OBS		-0130	33238	2676		-,,,			144		848							
	STD	0050	-0119	3344	2692		1429	9 0	080	144	124	773							
080	OBS		-0119	33440	2692					144		773							
	STD		-0163	3350	2698		0844	0	108			770							
080	OBS		-0163	33498 3355	2698 2702		0/15		121	144		770 765							
080	STD OBS		-0168 -0168	33550	2702		0415	, 0	134	144		765							
080	STD		-0090	3366	2709		9806	. 0	159			715							
	STD		-0028	3377	2715		9220	0	183	144	88	674							
080	OBS		-0026	33774	2715					144		673							
	STD		0046	3398	2728		8008	3 0	226			624							
080	OBS	0201	0047	33987	2729					145		623							
	STD STD		0123 0182	3418 3434	2739 2748		6994 6212		264 297	145		598 583							
080	085	T0300	0182	34344	2748		0212	. 0	471	146		583							
	STD		0240	3455	2760		5201	0:	354			582							
080	085	T0401	0241	34554	2760					146		582							
	STD		0227	3458	2763		4939	0.	405	146		567							
080	OBS	T0503	0226	34577	2763					146		566							
000	STD		0188	3457	2766		4682	04	453	146		556							
080	OBS STD	T0605 0700	0186 0137	34570 3454	2766 2767		4502	2 0	499	146		555 530							
	STD		0070	3450	2768		4275		542	146		503							
080	OBS	T0806	0065	34498	2769				-	146		501							
080	OBS	T0825	0050	34490	2769					146		481							

REFERENCE CTRY IO.	SHIP	LATITU	OE LO	NGITUOE	MARSO SQUA	RE	STATION TIL	WE	YEAR	ORIGIN CRUISE 5	ATOR'S	-	OEPTH TO	MAX. OEPTH OF	ORSE	WAVE RVATIONS	WEA- THER	CLOUG			TION	
CODE NO.	╂──┼		1/10	1/10			MO OAY HE		060		UMBER	$\rightarrow$	MOTTOM	S'MPL'		NGT PER SE		TYPE AMT			MBER	
311529	15 1	7403	ON 1 06	3100W	1259	43 (	ER W	06 1 INO SPEED	969 BARO	AIR TE	MP. °C	vis.	NO. 085.		25   CIAL	1   2	I X2	1618	I	0	0281	
						CODE	Im) OIR.	OR	(mba)		BULR	CODE	OEPTHS	OBSER/	/A TIONS							
					$\overline{}$		22	508	103		018		15				- 1	-	-			
	MESSENGR TIME O	CAST	TYPE	OEPTH (m)	т	5	s ·/	SIGN	T-A	ANOMALT-X		∆ 0 YN. M. x 10 <sup>3</sup>	VELC	CITY	O2 ml/l	PO4-P µg = 41/1	TOTAL-P ug + a1/1	NO2-N µg - al/l	NO3-N yg - at/l	SI O4-Si yg - al/l	рН	ç
													1								1	
	106		STO OBS	0000		64	3045 30445	241		003793	8 0	000		634 634	768 768							
	106		STD OBS	0010		29	3288 32880	264		001631	4 0	027		478 478	988 988							
	106		OBS	0019	-00 -00	65	33199 3321	267	70	001335	o 0	042	144	441 438	968 957							
	106		STD OBS	0020	-01	27	33304	268	31				144	415	882							
	106		STD OBS	0030 0047	-01 -01		3331 33391	268		001240	2 00	055		414 407	870 794							
	106		STD OBS	0050 0070	-01 -01		3340 33464	268		001163	6 0	079	144	407 411	792 775							
			STD	0075	-01	51	3347	269	5	001109	0 0	107	144	414	771							
	106		OBS STD	0093 0100	-01 -01	02	33518 3356	269	1	001053		134	144	442	750 732							
	106		STD OBS	0125 T0136	-00 00	25 02	3370 33753	270		000977	4 0	160		484 499	680 663							
	106		STD OBS	0150 0181		26 75	3382 33957	271		000911	4 0	183	145	513 543	650 626							
	100		STD	0200	0.0	99	3403	272	29	000795		226 264	145	557	617 598							
	106		STD OBS	0250 0274	01	54 77	3419 34264	273	2	000714			146	508	591							
	106		STD OBS	0300 0369		06 47	3434 34490	274		000643	6 0	298		626 657	588 578							
	106		STD OBS	0400 T0463		20	3452 34551	275		000539	6 0	357		658 662	570 559							
			STD OBS	0500	02	18	3455 34560	276	2	000502	3 0	409	146	567 568	559 553							
	106		STD	T0559 0600		98 66	3455	276		000464	2 0	457		661	543							
			_							000404	2 0				F 0.4							
	106 106		OBS OBS	T0658 T0678		21 06	34526 34516	27 <i>6</i>	57	000404	2 0		146	550 547	524 516							
DESCOUNTS					01	06	34516	276	57				146	547	516							
REFERENCE CTRY IO, CODE NO.			OBS DE LO	T0678	O1	06 DEN RE	34516 STATION THE	276	57	ORIGIN CRUISE	ATOR'S		146	MAX OEPTH OF	516 OBSI	WAVE ERVATIONS	WEA- THER CODE	CLOUG		STA	DOC ATION IMBER	
CTRY IO.	106	<del> </del>	OBS	T0678	O1	06 DEN RE	34516 STATION TI IGMTI MO OAY HI 08 26 1	276	57	ORIGIN CRUISE NO.	ATOR'S STATION NUMBER		146 146	MAX OEPTH	516 OBSI		THER			NU	NOITA	
CTRY IO,	106	LATITU	OBS	T0678	01 SOUA 10° 259	06  DEN ARE  1° 42  WAT COLOR	34516  STATION TIL  (GMT)  MO OAY HI  08 26 1  ER W  TRANS. OIR	276 ME £1/10 28 J	YEAR 1969 RARO METE	ORIGIN CRUISE NO. WGS 02 AIR TE R ORY	ATOR'S STATION NUMBER  9 MP. *C	( Vir	0EPTH TO BOTTOM 0625	MAX OEPTH OF S'MPL	516 OBSI 26	HGT PER SE	THER	TYPE AM		NU	MBER	
CTRY IO,	106	LATITU	OBS	T0678	01 SOUA 10° 259	OEN RE	STATION TILL IGMT!  MO OAY HI OB 26 1 ER W TRANS. OIR.	276  ME  2.1/10  28  ING  SPEED OR FORCE	YEAR  YEAR  1969  RARO METE (mb)	ORIGIN CRUISE NO. WGS 02 AIR TE R ORY	ATOR'S STATION NUMBER  9 MP. °C WET RULR	VIS.	0625 NO. OBS. DEPTHS	MAX OEPTH OF S'MPL	516 OBSI	HGT PER SE	THER	TYPE AM	ī	NU	MBER	
CTRY IO,	SNIP COOE	7407	OBS DE LO 1/10 5N O6	T0678	01 MARSI SOUA 10° 259	06 DEN RE 1° 42 ( WAT	34516  STATION THE GMT   MO OAY HE OB 26 1 ER W TRANS OIR.   22	276  ME  LIVIO  28 INO  SPEED OR FORCE  \$10	YEAR  YEAR  1969  RARO METE (mbs)	ORIGIN CRUISE NO. WGS 02 AIR TE ORY I RULB 8 028	ATOR'S STATION NUMBER  9 MP. °C WET RULR  021	VIS. CODE	0625 NO. 085, DEPTHS	MAX OEPTH S'MPL' SPE OBSER	516 OBSI	PO4-P	TOTAL-P	COOES	NO3-N	ST A NU	O29	S
CTRY IO,	106	7407	OBS  DE LO 1/10  5N 06	T0678	01 SOUA 10° 259	06 DEN RE 1° 42 ( WAT	STATION TILL IGMT!  MO OAY HI OB 26 1 ER W TRANS. OIR.	276  ME  2.1/10  28  ING  SPEED OR FORCE	YEAR  YEAR  1969  RARO METE (mbs)	ORIGIN CRUISE NO. WGS 02 AIR TE ORY RULB 8 028	ATOR'S STATION NUMBER  9 MP. "C WET RULR  0 2 1	VIS.	0625 NO. 085, DEPTHS	MAX OEPTH OF S'MPL'	516 OBSI 26	ERVATIONS HIGH PER SE	THER COOE	COOES	NO3-N yg - at/l	STA	MBER	SCC C
CTRY IO,	SNIP CODE	7407	OBS DE LO 1/10 5N O6	T0678	01  MARS/SOUA  10° 259	06 DEN RE 1° 42 ( WAT	34516  STATION THE GMT   MO OAY HE OB 26 1 ER W TRANS OIR.   22	276  ME  LIVIO  28 INO  SPEED OR FORCE  \$10	YEAR 1969 RARO METE (mbs) 098	ORIGIN CRUISE NO. WGS 02 AIR TE ORY I RULB 8 028	ATOR'S STATION NUMBER 9 MP. *C WET RULR 021	VIS. CODE	06PTH TO BOTTOM 0625 NO. OBS., DEPTHS 15	MAX OEPTH S'MPL' SPE OBSER	516 OBSI	PO4-P	TOTAL-P	COOES		ST A NU	O29	\$ C C C
CTRY IO,	SNIP CODE	7407	DE LO 1/10 5N O6	T0678  NGITUDE 100 1//10 12080W	01 MARS/SOUA	OGEN RE 1º	34516  STATION TI (GMT)  MO   QAY   1  ER   W   1  TRANS, OIR.   22  S */  3026 30263	276  ME 2.1/10  28  INO  SPEED OR FORCE S10  SIGN  24( 24(	969 RARO METE (mb) 098	ORIGIN CRUISE NO. WGS 02 SAR TE ROULE B 028 SPECIFIC VOLUMANOMALT-XI	ATOR'S STATION NUMBER  9 MP. C WET RULR  021	7 A 0 7 N. M. X 103	0625 NO. 085, DEPTHS 15	MAX OEPTH OF S'MPL'  SPE OBSER'  JNG OCITY  5 95	516  OBSI  OBSI  SOUR.  26  CIAL VATIONS  O2 ml/I  796 796	PO4-P	TOTAL-P	COOES		ST A NU	O29	S C C C
CTRY IO,	SNIP COOE IS	7407	DE LO 1/10 5N O6 CARO TYPE STD OBS STD OBS	0000 0000 0011	01 MARSS SOUA 10° 259 7 7 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	06  DEN   RE	34516  STATION TI (GMT)  MO DAY HI  DB 26 1  ER W  1TANS OIR.  22  S -/  3026 30263 3293 33064	276 ME L1/10 28 1 INO SPEED OR FORCE S10 SIGN 24( 264 265	YEAR 1969 RARO METE (mbs) 098	ORIGIN CRUISE NO. WGS 02 PR ORY BULL ROWALT-AL O03852	ATOR'S STATION NUMBER  9 MP. 'C WET RULR  021  50 20	VIS. CODE 7 7 17N. M. X. 10 <sup>3</sup> 0000	0625 NO. 085, DEPTHS 15	MAX OEPTH OF S'MPL' SPECITY	08516  OBSI  OBSI  OPEN  OPEN	PO4-P	TOTAL-P	COOES		ST A NU	O29	200
CTRY IO,	SNIP CODE IS	7407	OBS  DE LO 1/10  5N O6  CARO 177E  STD OBS STD OBS STD OBS OBS OBS	0000 0000 0010 0020	01 MARSS SOUA 2 10° 259 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	006  DEN   RE	34516  STATION TIL (GMT)  MO QAY HI  OB 26 1  ER W  TRANS OIR.  22  S -4.  3026 30263 3293 33064 3323 33228	276  ME  LIVIO  28   INO  SIGNO  SIGNO  24( 24( 264 265 265 265	YEAR  1969  RARO METE (mbe)  098  077  77  748  75  75	ORIGIN NO.	ATOR'S STATION NUMBER 9 MP. TO WET RULR O21	VIS. CODE  7  7  7  10  000  000  000  000  000	146 146 0625 NO. 085, DEPTHS 15	MAX OPPTH OF S'MPL'  SPH OBSER'  SPH OBSER'  595 595 449 440 4409	796 796 977 995 804 804	PO4-P	TOTAL-P	COOES		ST A NU	O29	200
CTRY IO,	SNIP COOE  1 S  MESSENGR TIME C HR 1/10  128	7407	DE LO 1/10 5N O6 CARO TYPE STD OBS STD OBS STD	0000 0000 0010 0020 0010 0010 0020 0020	01 MARSS SOUA 2 10° 259 1 0 0 3 0 3 0 0 0 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 0 1 0	006  WAT  WAT  777  777  777  377  377  334  334  33	34516  STATION TIL TRANS OIR.  108 26 1 22 2 5 %.  3026 30263 3293 32064 3323	276  ME  28 17  100  SPEED  OR  FORCE  SIGN  24( 264 265 265	YEAR  1969  RAROMETE (mbs 098 6975 775 779	ORIGIN CRUISE NO. WGS 02 PR ORY BULL ROWALT-AL O03852	ATOR'S STATION STATION  WET RULR  021  500  900  400	VIS CODE 7 7 7 7 7 7 7 7 7 7 000 000 000 000 00	144 144 144 144 144 144 144 144 144 144	SPE SMPL SMPL SPE SMPL SMPL SPE SMPL SMPL SPE SM	796 796 797 795 804 804 792 791	PO4-P	TOTAL-P	COOES		ST A NU	O29	<b>NOC</b>
CTRY IO,	106 SNIP COOE 15 15 128 128	7407	OBS  DE LO 1/10  5N O6  CARO TYPE  STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD	0000 0000 0011 0020 0030 0030 0030 0030	01 MARSS 50UA 10° 259	06  DEN   RE	34516  STATION TIL IGMTI MO DAY HI  08 26 1 ER W  17 AMS OIR.  3026 30263 3293 33064 33228 33228 33228 3328 3328	276  ME  LLIVIO  28  INO  SPEED  OR  PORCE  24(  24(  264  265  266  266  268  268  268	YEAR  1969  RARGETE (mbs)  091  448  597  757  779  880  889	ORIGIN NO.	ATOR'S STATION STATION  9 MP. T  WET RULR  0 21  5 0  9 0  4 0	VIS. CODE  7  7  7  10  000  000  000  000  000	144 144 144 144 144 144 144 144 144 144	MAXX OPPTH OF SYMPL!  SPINO OBSERVING OBSERVIN	08516  0851  002.  26  796  796  796  977  995  804  792  791  798	PO4-P	TOTAL-P	COOES		ST A NU	O29	500
CTRY IO,	SNIP   COOR     SNIP   COOR	TAUTU ACAST NO.	OBS  DE LO 1/10  5N O6  STD OBS	0000 0000 0001 0001 0001 0001 0001 000	01 MARSSI SOUA 2 10° 259 259 259 259 259 259 259 259 259 259	06  DEN   1-   1-   1-   1-   1-   1-   1-   1	34516  STATION TIL IGMTI MO OAY HI 08 26 1  TTANS OIR.  22 5 %.  3026 30263 3293 33264 3329 3328 3328 3328 3328 3328 3328 3328	2766  ME  LIVIO  28  SPEED  SPEED  SIGN  240  240  265  265  265  266  268  268  268	1969 PARA T 098 PARA T	ORIGIN  CRUISE NO.  WGS 02  R ORY 1 BULL  R ORY 2 BULL  O03852  001564  001302	ATOR'S STATION NUMBER  9 MP. TO WETT RULR 021 5 0 2 0 9 0 4 0 7 0	VIS CODE 7 7 7 7 7 7 7 7 7 7 000 000 000 000 00	1460 1460 1460 1460 1460 1460 1460 1460	MAXX OCEPTION OF SMAPL OF SMAP	796 796 797 796 797 797 798 798 798 798	PO4-P	TOTAL-P	COOES		ST A NU	O29	SCC
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		198		STD	_			142		29		580		00	1252	5 (	0053		-	408	836										
		198		085	003			143	-	292		580		•••					_	408	833										
		170		STD				151		36		586		00	1195	1 (	0077	7	14	408	789										
		198		OBS	005			152	33	361	26	586	•						14	408	786										
				STO	007	5	-0	134	33	42	26	591		00	1152	2 (	107			421	766										
		198	}	OBS	007		-0	130		426		691								423	763										
				STO				056		60	_	702		00	1040	9 (	)134			464	716										
		198	}	OBS	010			046		622	_	704							-	470	711										
				STO				031	_	69	_	706		00	1013	2 (	160	-		510	690										
		198		08S	T013			044 081		714		707 718		00/	3897	7 (	184			517 539	684 658										
		198	,	OBS	015			087		909		720		000	1600	, ,	310.			543	654										
		730	,	STO				138		06		729		00	0799	7 (	0226			575	632										
		198	3	085	T020			145		077		730								580	629										
		1,0		STO				166	_	16		735		00	0745	9 (	265	5	14	597	618										
				STE			0	196	34	28	2	742	2	000	0680	7 (	300	)	14	621	601										
		198	3	OBS	T030	6	0	200	34	292	2	743	3							623	599										
		198	3	085	T031	19	0	209	34	328	2	745	5						14	630	594										

														,				
REFERENCE SHIP		- E	MARSDEN	STATION T	TIME		NATOR'S		DÉPTH TO	MAX, DEPTH	DBSI	WAVE ERVATIONS	WEA-	CLOUD			OOC	
CODE NO. CODE	ATITUDE 1/10	TONGILOOF	10" 1"	MO DAY		CRUISE NO.	STATION		BOTTOM	S'MPL'S		HGT PER S			!		UMBER	
						2 145 5 03			0850		00	o x	X2	68			0033	
311529 15 7	4298N	057470WI	258 47 (		225 1969	A ID T	MP. ℃	T	ND.			0 1 1 1	12	, 0.0	1	1	0033	
			COLDR	TRANS. DIR.	- BA	TER DRY	WET	VIS.	Des.	DBSERV.								
			CODE	(m) DIK	FORCE [m	bs} BULB	anra		DEPTHS									
				00	500 1	69 044	029	8_	15									
MESSENGR	AST CAR	D	т °с	s */		SPECIFIC VOL		E A D	sou	IND	O2 ml/I	PD4-P	TOTAL-P	NOZ+N	NO3-N	SI O4-Si	pН	
	NO. TYP		' '	3 7	SIGMA-T	ANDMALY-	1107	X 10 <sup>3</sup>	, AETD	CITY	02 11101	μg - α1/1	yg + a1/(	hå - as/(	μg - α1/l	μg + at/l	P/1	
IIIK 1710																		П
1 1	J S1	0000	0362	3081	2452	003426	59 C	000	149	596	863	1	'	•	,			ľ
225	OBS		0362	30809					145	96	863							
223	ST		0340	3205	2552	002473	36 0	030	146	05	977							
225	OBS	0010	0340	32046	2552					505	977							
	\$1		0067	3283	2635	001687	72 (	050			1046							
225	083		0067	32832							1046							
	\$1		0099	3308	2652	00151	77 (	066		516	951							
225	089		0099	33078		00125	36 (	094		516 476	951 806							
***	\$1		-0005 -0005	3335 33354	2680 2680	00125	20 (	1094		476	806							
225	0BS		0002	3359	2699	00107	52 (	123		487	723							
225	083		0002	33594		00107				487	721							
24.5	S1		0017	3369	2706	001000	52 (	149	144	499	694							
225	OBS		0018	33697	2707					500	693							
	S1	0125	0049	3378	2712	000954		174		519	662							
	\$1		0071	3385	2716	000914	44 (	197		534	634							
225	OBS		0073	33863						536	631							
	\$1		0086	3400	2727	00081	J1 (	240		551 5 <b>5</b> 2	590 589							
225	OBS		0087	34005 3412	2728 2734	00074	62 (	279		579	585							
	S1 S1		0125 0151	3422	2741	000690		315		600	578							
225	OBS		0151	34224		03007		,,,,		501	577							
225	S1		0161	3435	2750	000603	33 (	380		523	551							
225	083		0161	34355					146	523	550							
	ST		0180	3447	2758	00053	59 (	437		649	545							
225	083		0180	34466						649	545							
	S'		0191	3452	2762	00050	81 (	)489		671	544							
225	OBS		0191	34524		00050	11 /	)539		672 690	544 546							
	S:		0195	3454 34554	2763	00050	11 (	,,,,,		708	548							
225	OBS	S T0799 TD 0800	0198 0198	34554	2764	00049	77 (	589		708	548							
225	OB:		0198	34555		00049		, - 0 )		714	550							
225	UD.	3 10031	0199	54555	2104						- 50							

																									_
REFERENCE	1 4 71711 00		LE LE	MARS	DEN	STAT	IIDN IGMT	TIME	YEAR	_	DRIGINAT	OR"S	_	DEPTH	DEPTH		WAVE	u e	WEA-		DUD			NDDC	
CODE ND. CDDE	LATITUDE		AGITUDE TO	10°	11.			HR.1/10	TEAK	CRUISE ND.		TION		TO BDTTDM	D.C	000	HGT PER		CODE		AMI			TATION	
										1			$\rightarrow$		3 1411 E			3EA							1
311529 15	75570N	106	0470W	259	150 WA			149_ WIND	1969		AIR TEMP	<b>50</b>	(	0164		1 00	0 X		X 2	4	8	l	- 1	0034	H
					COLDR	_	1	SPEE	BAR MET	o∙ ⊢		_	VIS.	ND.		CIAL									
					CODE	TRANS.	DIR	FORC	41			BULB	CODE	DEPTHS	ORZEK	ZNDITAN									
							00	500	16	8 0	28 (	21	7	10											
MESSENGR	CAST	CARD		T		1		<u> </u>		T	VOLUME	3	ΔD	7 501	UND		PD4-8		OTAL-P	NO <sub>2</sub>	, I	NO3-N	SI 04-5		5
TIME O		TYPE	DEPTH (m)	1	℃	\$	٠/	ZIG	T-AM	AHON	ALY-RIO7	DYI	N. M.		CITY	D2 m1/1	yg - 01,		νg - οι/Ι	NG -		μg - at/l	29 - at/		ç
HR 1/10				+-		+		+				<del>+</del> ^		-			+	+			-			-	+
i	1 1	_		1		١		١		١		1		1			1	i	1		- 1			1	- 1
1/0		STO	0000		192	26			130	006	5005	UU	00		465	841									
149		BS STD	0000 0010		192 218	31	613		130 540	002	5871	00	45		465 548	841									
149		BS	0010		218		 771		540	002	3011	00	743			1072									
147	•	STO	0020		044	32		_	524	001	7874	0.0	67	_		1028									
149		BS	0020		044		685		524							1028									
		STD	0030	-0	030	32			547	001	5655	0.0	84		455	927									
149	C	BS	0030	-0	030	32	931	. 26	547					14	455	927									
		STD	0050	-0	055	33	20	26	570	001	3474	01	13	14	451	722									
149	C	BS	0050		055		202		570						451	722									
		STD	0075		038	33	-		88	001	1776	01	45		466	611									
149	C	BS	0075		038		432		588						466	611									
		STD	0100		012	33			598	001	0856	0 1	.73		484	604									
149		85	0100		012		567		598	000	0157	0.9	0.5	_	484	604									
3.4.5		STD	0125		017	33	_		705	001	0157	01	99		503	594									
149		BS	0125	U	017		677	2	705					14	503	594									
149		STD 8S	0150 0150			33	75 750	1								589 589									
149		)8S	0150				774									585									
149	,	103	0155			33	114	•								282									

REFE	RENCE	PINS			-	E MA	ARSDEN		STATION	TIME				ORIGIN	ATOR'S		OEPTH	M.A. OEP1	er e	WA		w		CLO				NODC	
TRY	NO.	1000	LATITUDE		NGITUOE		DUARE		IGM			EAR	CRUI		TATION		OT OB	. 01	F Out		NONS	- 60	De l	CO				TATION	
-			1,	/10	'1/10	10	• 1	- /	O OAY	HR,1/	10[		NC	,	40 W BER	-		" S'MP	L'S OIR	HGT	PER S	i A	-	TYPE	AMT				-
31	1529	15	754501	N   06	1020W	25				19		969	WG				3439	<u> </u>	00	0	X	X	1	6	7			0035	il .
							-	WATE		WIN	PERO	BARO		AIR TE	_	Vis.	NO. 095.		PECIAL										
							COL		IMI DI	R.	ORCE	(mbs)		BULB	BULB	COOE	OEPTHS	OBSE	RVATIONS										
							$\vdash$	_				_	$\rightarrow$	042	022	1	1.												
			T		1	_			0	0 [51	00	149		043	033	1	14			Ļ.			1		_				
		MESSENGR TIME	CAST NO.	CARO	DEPTH Im		T *C		5 %.	.	SIGMA	7-7		FIC VOLU		Λ. D.		UND	02 ml/l		04-P	TOTAL		NO2-		NO3-N	51 04-5		S.
		HR 1/10	1 NO.	ITTE									AIN	J.M.A.L.I.—21	*	X 10 <sup>3</sup>	VEL	OCITY		νg	- 01/1	µg - a	M	n 6 - 0	171	\int 0 - gu	yg = a1/l	-	С
																							- [						
			•	STD	0000		052	7	3058		241	7	00	3755	7 0	000	14	662	750	,									
		196	(	DBS	0000		052		3057	9 ;	241	7						662	750										
				STD	0010		047		3183		252		00	2768	4 0	033		661	886										
		196	(	DBS	0010		0479		3182		252							661	886										
				STD	0020		010		3284		263		00	1706	6 0	055		515	1023										
		198	(	DBS	0020		010		32830		263					^			1023										
				STD	0030		001		3310		2660		00	1442	1 0	071		466	943										
		196	(	DBS	0030		001		3310: 3335		2660 2682		00	1235		098		466	652										
		198	,	STD DBS	0050		005		3336:		268:		00	1233	0 0	V 70		454	644										
		170	,	STD	0075		002		3353		269		٥٥	1110	3 0	127		475	629										
		198	(	DBS	0076		001		3353		2696		-	1110	- •			476	628										
		1,0	`	STD	0100		002		3367		270		00	1023	5 0	153		501	608										
		196	(	DBS	0101		002		3367		2704						14	502	607										
				STD	0125		0054	4	3378	:	271	1	00	0957	6 0	178	14	521	601										
		198	(	DBS	0127		005		3378	5 2	271	2						523	600										
				STD	0150		008		3386		271		00	0900	1 0	201		541	593										
		196	(	285	0152		008		3389		2719							542	592										
				STD	0200		012		3405		2729		00	0796	1 0	244		568	584										
		196	(	DBS	T0202		012		3405		2730		00	.71-	- ^	200		569	583										
				STD	0250		015		3419		273	-	00	0717	2 0	282		594	566										
		198	(	DBS	T0254		0160		3420) 3432		2731 274		0.0	0634	6 0	316		596	564 540										
		198	,	STD DBS	T0304		017		3432 3433:		2741		00	0034	0 0	210		614	538										
		198		STD	0400		019		3442 3442		275:		00	0580	2 0	376		640	529										
		196	(	085	T0404		019		3442		275		00	0,00	_ 0	- , 0		640	528										
		198		DBS	0429		V 1 7		3442									0	523										
		170	•		Ţ 1, E 2				- '-																				

REFERENCE		-	# MARSDEN	STATION TIM		ORIGINAT	OR'S	DEPTH MAX.	WAVE		.ouo	NODC
CTRY ID. CODS	LATITUDE	LONGITUDE	SOUARE	(GMT)	YEAR		TION	TO OF	DESERVATIONS	CODE	0062	STATION
CODE NO.	1/10	1/10	= 10° 1°	MO DAY HR.1	/10	NO. NU	MBER	BOTTOM S'MPL'S OIL	. HGT PER SE	A CODE TYPE	EAMT	NUMBER
311529 15	76050N	061500W	259 61	08 28 15	6 1969	WGS 036		0512 - 0	ololx	X1 6	. 7	0036
311307 10			WAT	ER WIN	BAR	A ID TE MAD	. °C	NO. ERECIAL				
			COLOR	LINGUE   DIE	SPEED MET	ER DRY	WET COD		s			
			COOE	im!	FORCE [mb	) BULB E	IULB	000000	_			
				08 S	05 10	5 027 (	06 7	14				
MESSENGI		RO OEPTH Im	1 70	/	515111	SPECIFIC VOLUME	<b>≥</b> △ 0	SOUNO	PO4-P	TOTAL-P NO	2-N NO3-N	5104-51
TIME HR 1/10	T NO. TY	PE OEPIH IM	'   ' '	s 1/4.	SIGMA-T	ANOMALY-X107	X 103	1.	1/10 - gq		ot/1 pg - ot/1	S1 O4-Si pg - 61/1 pH C
11.11	<del>  </del>											
	1 1	~ 0000	0107	1 1	1012	0000700	1 0000	1 1 2 2 2	1 1	1	1 1	1 11
164		TD 0000 S 0000	0127 0127		1862 1862	0090790	0000	14390 14390				
156		TD 0010	0127		2582	0021681	0056					
156			0077		2582	0021661	0056	14491				
170		TD 0020	-0046		2640	0016399	0075					
156	-		-0048		2640	0010377	0013	14444				
		TD 0030	-0098		2656	0014855	0091					
156			-0098		2656		• • • •	14425				
		TD 0050	-0065		2675	0013053	0119					
156	08		-0065		2675			14447				
	S	TD 0075	-0044	3343	2688	0011789	0150	14463				
156	08:	s 0075	-0044	33427	2688			14463				
	S	TD 0100	-0024	3355	2697	0010945	0178	14478				
156	0B:	s 0100	-0024	33548	2697			14478				
	S	TD 0125	0020	3368	2705	0010180	0205	14504				
156	6 OB:	S 0125	0020	33676	2705			14504				
		TD 0150	0041		2712	0009485	0229					
156			0041		2712			14520				
		TD 0200	0069		2721	0008677	0275					
150			0071		2722			14544				
		TD 0250	0104		2730	0007869	0316					
156			0104		2730	0007111	035.	14568				
164		TD 0300	0135		2738	0007114	0354					
156		S T0300 TD 0400	0135		2738 2755	0005544	0417	14592 14629				
156			0172 0172		2755	0005566	0417	14629				
156		TD 0500	0112	34424	2100			14029				
156	_			34449								
100	, 50	0,000		74442								

Table III. Observed and interpolated oceanographic data from stations taken by USCGC WEST-WIND, 21 September to 2 October 1969, prepared from NODC Listing No. 31–8160.

REFERENCE SHIP CODE LATITUDE LONGITUDE TO CODE HO. 1/10 1/10	MARSDEN STATION TO SOUARE (GMT)	YEAR	ORIGINATOR'S  CRUISE STATION NO. NUMBER	ADTYDU DF	WAVE OBSERVATIONS IR HGT PER SEA	WEA- CLDUI THER CODE	STATION	
318160 WE 74440N 064050W	259 44 09 21 1	09 1969	WE2 001	0320 0	000	20 6	0001	
. 310100/ 42 / / / / / / / / / / / / / / /		IND BAR	O- AIR TEMP. C	NO. SPECIAL				
	COLOR TRANS. DR.	OR (mb	ER DRY WET COC		NS			
	DT S 16	\$10 01	2 000 -006 7	11				
MESSENGE CAST CARD DEPTH (m)	T 10 S 1/4.	SIGMA-T	SPECIFIC VOLUME DYN. A	A. D2 1	m1/I PO4-P µg = 01/I	101A L-P NO2-N yg - ol/l		500
STD 0000	0085 3240	2599	0020264 0000	14496				
109 085 0000	0085 32400	2599		14496				
STD 0010	0085 3245	2603	0019881 0020					
08S 0010	0085 32450	2603		14498				
570 0020	0080 3255	2611	0019091 0040					
085 0020	0080 32550	2611	2012550 005	14499				
STD 0030	-0080 3318 -0080 33180	2669	0013559 0056	14436				
OBS 0030 STD 0050	-0080 33180 -0095 3336	2669 2684	0012119 0082					
085 0050	-0095 33360	2684	0012117 0008	14434				
STD 0075	-0050 3353	2696	0010977 0110					
08S 0075	-0050 33530	2696		14462				
STD 0100	-0005 3375	2712	0009494 0136	14490				
08S 0100	-0005 33750	2712		14490				
STD 0125	0040 3386	2719	0008888 0159					
085 0125	0040 33860	2719		14516				
STD 0150	0075 3394	2723	0008485 0181					
085 0150	0075 33940	2723	0007/20 022	14537				
STD 0200	0134 3413	2735	0007439 0221	14575 14575				
08S 0200	0134 34130 0175 3427	2735 2743	0006698 0256					
STD 0250 OBS 0250	0175 3427	2743	0000096 0296	14603				

REFERE		ZHIP	LATITU	DE	LDNGITUDE	DRUFT	MARSI			TION (GM)	TIME	YEAR	CRUIS	DRIGIN	DTAP		DEPTN	DEFIE		WAV ERVA1		WEA-	CLC	DES			NOOC	
	NO.	CODE	•	1/30	1/1	P =	10°	1°	MOT	DAY	HR,1/1	0	NO.		NUM		8DTTD/	S'MPL	S OIR	HGT P	ER SI	 ODE	TYPE	AMT			REMUI	
318	160	we	7454	on I	064030W		259	44	09	21	124	1969	WE	2 00	2		0230	) L	00	2 0		26		6			0002	
							-	WAT	ER	+	WIND	6A1		AIR TE	т —	VIS.	NO.	SPE	CIAL									
								COLOR CDDE	TRANS	DIS	L SPE	R (-)		ORY GULB	8 L	ET COD	DEPTH	O ØSER'	ATIONS									
								DT	S	32	2 50	8 01	0 (	003	-0	03 7	10											
		AESSENGI TIME	of NO.	CAR TYP		(m)	t	°c	2	٠/	2	GMA-T		K VOLU		₹ Δ D DYN, A x 10 <sup>3</sup>		UND	O <sub>2</sub> m1/I		4-P		NO <sub>2</sub> -		ND3-N pg - al/l	51 D <sub>4</sub> -5		200
	Γ						1															$\neg$						71
				51			0.0	68	32			608	00	1941	. 1	0000	14	489										
		12	4	085				168		500		608			_			489										
				S1 089				)66 )66	32	うう 550		612 612	00	1901	В	0019		491										
				51				35	32		_	646	00	1580	7	0037		484										
				085				35		950		646	00.		'	0051		484										
				51			-00			30		678	00	278	19	0051		455										
				085	003	0	-00	041	33	300	) 2	678					14	455										
				\$1			-00		33			694	00	1119	2	0075		455										
				085			-00			500	_	694				. 1		455										
				ST			-00		33			709	000	982	0	0101	-	479										
				085			-00	28		700 77		709 712	00/	951	0	0125		479										
				089				28		770		712	000	J 7 J I	. 0	0125		505										
				51				)53	33			720	000	873	4	0148		522										
				085				)53		890		720						522										
				\$1	D 015	0	0.0	91	33			726	000	820	15	0169		545										
				085			00	91		990	) 2	726						545										
				51				20	34			730	000	787	2	0210		567										
				085	020	0	01	120	34	060	2	730					14	567										

CTRY ID.	SHIP	LATITU	DE LO	NOCITY BUILDING	MARSDEH SQUARE	STATION TIN	YEAR	CRUISE S	ATOR'S STATION NUMBER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL"	OBSE	WAVE RVATIONS	WEA- THER CODE	CLOUD CODES		TON MUN	OH
318160	WE	7504			259 54 0	9 21 1	41 1969	WE2 00		0120		32	1 0	01	3		00	03
						TRANS. DIR.	SPEED METE	R DRY	WET COO	HO. OBS. DEPTHS	SPE OBSERV	CIAL						
					DT	s 32	S10 00		-006 6	07								
	MESSENG TIME	CAST	CARD	DEPTH (m)	T *C	s */	SIGMA-T	SPECIFIC VOLU	ME & A D	SOL	UHD	O2 ml/l	PO4-P	TOTAL-P	HO2-N	NO3-N	SI O4-SI	pH C
	HR 1/10		TYPE					ANOMALY-X1	x 10 <sup>3</sup>	VELC	DCITY		μg - α1/1	μg • αl/l	μg + α1/I	yg = o1/l	υg - et/l	c
	1	1	STD	0000	0080	3240	l 2599	002023	7 0000	144	493 493			1	1		1	- 11
	14	1	OBS STD	0000	0080 0071	32400 3244	2599 2603	001988	3 0020		493 491							
			OBS	0010	0071	32440 3303	2603 2652	001517		14	491 483							
			OBS	0020 0020	0030	33030	2652			14	483							
			STD OBS	0030 0030	-0040 -0040	3332 33320	2679 2679	001264		14	456 456							
			STD 085	0050 0050	-0040 -0040	3361 33610	2702 2702	001041	7 0075		463 463							
			STD OBS	0075 0075	0010 0010	3376 33760	2712 2712	000949	7 0099		493 493							
			STD	0100	0047	3385	2718	000900	5 0123	14	515							
			085	0100	0047	33850	2718			14	515							
CIRY ID.	SHIP	LATITU	DE LO	NGITUDE NET	MARSDEN SOUARE	STATION TIME	YEAR	CRUISE S	ATOR'S	DEPTH TO BOTTOM	DEPTH	OBSE	WAVE ERVATIONS	WEA- THER CODE	CODES		ION TATZ	ION
COOE HO.			1/10	1/10		MO DAY HR			HUMBER		S'MPL'		O O	00	TYPE AMI			04
318160	1 WE	7514	ON 106	4040W	WAT	ER W	SPEED BARG	O- AIR TE	MP. °C VIS.	0160 HO. OBS.		CIAL	0 10 1	1 00	1 6 1 6	'	1 00	1041
					COLOR	TRANS. DIR.	OR Imbi		BULB COD	DEPTHS	OBSERV	/A TIONS						
					DT	S 32	510 00		-006 7	08			1					
	HR 1/1		CARD	DEPTH (m)	7 %	5 %.	SIGMA-T	SPECIFIC VOLU		. VEFO	OCITY	O <sub>2</sub> m]/I	PO4-P µg - at/l	TOTAL—P Pg = ol/I	NO <sub>2</sub> -N µg + at/l	NO <sub>3</sub> -N yg - al/I	\$1 O4~\$1 yg = at/1	рн с
	i	ı	STD	0000	0080	3215	2579	002214	3 0000	14	490 490						,	11
	15	8	OBS STD	0000	0080 0070	32150 3239	2579 2599	002025	9 0021		490 490							
			OBS STD	0010	0070 0063	32390 3263	2599 2619	001839		14	490 492							
			085	0020	0063	32630	2619	001323		14	492							
			STD OBS	0030	-0084 -0084	3322 33220	2673 2673			14	434							
			STD OBS	0050 0050	-0068 -0068	3351 33510	2696 2696	001106	9 0081		449 449							
			STD OBS	0075 0075	0002	3373 33730	2710 2710	000968	6 0107		489 489							
			STD	0100	0028	3380	2715 2715	000928	2 0130	14	506 506							
			STD	0125	0055	3391	2722	000859	3 0153	14	524							
			085	0125	0055	33910	2722			14	524							
REFERENCE CTAY 10.	SHIP	LATITU	IDE LO	NGITUDE HOO	MARSDEN SQUARE	STATION TO	ME YEAR		ATOR'S STATION	DEPTH TO	MAR DEPTH OF		WAVE ERVATIONS	WEA- THER	CLOUG		NO: STAT	ION
COOR HO.		7504	1/10	17/10 - 2		MO DAY HI		NO.	NUMBER	BOTTOM	" S'MPL		HGT PER SI		TYPE AM		NUN	—
, 318160	WE	1 7524	ON 106	4070W	WAT	ER W	IND BAR	O- AIR TE	MP. °C	NO.		CIAL	0 0 1	1 00	1 6 6	1	1 00	005
					COLOR	TRANS. OIR.	OR (mb		BULB COC	DEPTHS	OBSER	ZNOITAV						
	MESSENG	CAST			T D T	S 32	S10   99		-006 7	08			T					
	MESSENG TIME HR 1/1	NO.	CARD TYPE	DEPTH (m)	7 %	s */	SIGMA-T	SPECIFIC VOLU	ME	A. VELO	OCITY	O <sub>2</sub> ml/3	PO4-P ug - et/l	TOTAL—P g - al/l	NO2-N yg - at/l	NO3-N vg - oi/l	S1 O4-Si µg - at/l	рН СС
	1	ŀ	STD	0000	0090	3246	2603	001983	4 0000		499		1		1		1	11
	17	1	OBS STD	0000 0010	0090 0083	32460 3247	2603 2605	001971	8 0020		499 497							
			OBS STD	0010 0020	0083 0050	32470 3295	2605 2645	001588		14	497 491							
			OBS	0020	0050 -0076	32950 3346	2645 2692	001143		14	491							
			OBS	0030	-0076	33460	2692			14	441							
			STD OBS	0050 0050	-0086 -0086	3354 33540	2699 2699	001077	3 0073		441 441							
			STD OBS	0075 0075	-0022 -0022	3371 33710	2710 2710	000972	5 0099	14	477 477							
			STD	0100	0025 0025	3384	2718 2718	000896	1 0122	14	505 505							
			STD	0125	0055	3390	2721	000866	9 0144	14	523							
			OBS	0125	0055	33900	2721			14	523							

REFEBENCE CTRY ID. CODE NO.	SHIF	LATITUDE 1/10		ONGITUDE	MARS SOU	ARE	STATION TIME (GMT)			YEAR		RUISE NO.	\$1	STATION NUMBER		DEPTH TD BOTTON	MAX DEPTH OF S'MPL	1	OBSER	WAVE ERVATIONS HGT PER SEA		WEA THE		CODES			NODC STATION NUMBER	
318160	WE	- " " " -		64040W	259	54 WA	09 Z	1	190 WIND		ARO-	WE2	R TEA	AP. °C	vis.	0450 NO. ORS.	SPI	ECIAL		0 0		00	,	6 7			0006	1
						COLDR	TRANS.	DIR.	FORC	e "	(ETER (mba)	BU	LB	BULE	CODE	DEPTHS	OBSER	VAIID	NS									
						DT	S	32	505	5 9	86	01	.0	-003	7	13	<u> </u>						,					_
	MESSENGR TIME	ME OF ND. TYPE		DEPTH (m)	т	T *C		s %. sic		GMA-T		SPECIFIC VOLUME ANOMALY—X107		7 01	△ D (N, M ( 10 <sup>3</sup>	SOUND		D <sub>2</sub> ml/l		PD 4-P		10TAL- pg - et/		D2-N g - 01/1	NO <sub>3</sub> -N νο - αι/Ι	\$1 O4-		s C C
																												$\mathbb{H}$
	'	STD		0000	. 0	0080		3230		2591		0020999		9 0	000	14	492											
	190 OBS		OBS	0000			32300		2591								492											
			STD	0010		0073		3247		2605		0019664		4 0	020		493											
			OBS	0010		073	324			505							493											
			STD	0020		055	328			33		0016	976	6 0	039		491											
			OBS	0020		055 052	328			533		0013	3204	4 0	054		449											
			STD	0030		052	332			573		0013	,20.	- 0	0 )4		449											
			SID	-		-0076		3343		2689		0011651		1 0			444											
			OBS	0050		-0076		33430		2689				_	1		444											
	_		STO			067	3358			701		0010527		7 0	0106		14455											
			OBS	0075	0100 -0003		3373 2			701 2710		000965					455											
			STD	0100										57 0	132													
			OBS	0100		003	33			710							490											
			STD			041	338			715		0009	719	8 0	155		516											
			OBS	0125			33820 3392			2715 2722		0008570		0 017			516											
			STD	0150 0150		064 064	339	_		722		0000	22/1	0 0	7 1 1		532											
			OBS			103	340			732		000	768	2 0	218		560											
			OBS	0200		103	340			732		000	, 00.		- 10		560											
			STD			152	34			742		0000	575	0 0	254	14	592											
			OBS	0250		152	34	240	27	742						14	592											
			STD			175	343	34	27	748		0006	18	7 0	286		612											
			OBS	0300	0	175	343	340		748							612											
			STD			184	344			756		0009	554	4 0	345		634											
			OBS	0400	0	164	344	440	2	756						14	634											

REFERENCE CTRY ID. CODE ND.	SHIP	LATITUDE LONGITUDE 504			MARSDES SQUARE		STATION TIME IGMT)		YE AR	CRUISE STAT			DEPT TO BD TTO	DEPT	H DBS		WAVE RVATIONS		CLOUD CDDES		2	NDDC FATION UMBER	
31816	DIWE	7544	ON 06	4040W	259 5				969	WE2 00			061	0	00	00	1	70	X 9			0007	
				<u> </u>	WAT		SPEED	BARO	• —	MP. C	vis.	NO.	31	ECIAL									
						LOR	TRANS. DIR.	FORCE	(mba)		BULG	COD	DEPTI	HS OBSER	ZIIOITAV								
					р	T	s 00	500	991	010	-003	6	15										
	MESSENGR TIME HR 1/10	WO.	CARD TYPE	DEPTH (m)	т "с		s ·/	SIGM	А-Т	SPECIFIC VOL	JME 107	E △ D YN. <i>M</i> x 10 <sup>3</sup>	. ,	SOUNO	O2 ml/l	PO4-		TOTAL-P up - ot/I	NO2-N µg - al/1	NO3-N µg - al/l	51 D4-Si µg - ot/I	рН	500
	202																						
			STD	0000	0060		3260	261 261		0018607		0000		4487									
			OBS 0000 STD 0010 OBS 0010		0060 0052 0052					0018564		0019		4487									
							32600	261 261		0010304		,01,	_	4485									
			STD 0020		0040		3290	264		0016214		0036		4485									
			OBS	0020	0040		32900	264						4485									
			STO	0030	-0063		3327	267	-	0012932		0051		4445									
			OBS STD	0030 0050	-006 -007		33270 3348	267 269		001128	7 (	075		4445									
			OBS	0050	-007		33480	269		001120	, ,	,0 1 2		4447									
			STD	0075	-002		3365	270		001016	9 0	102		4475									
			OBS	0075	-002		33650	270						4475									
			STD 0100		0007		3380	271		000917	3 0	126		4496									
			OBS STD	0100 0125	000		33800 3386	271 271		000896	2 (	148		4496									
			OBS	0125	005		33860	271		000030	, ,	, , 40		4522									
			STD	0150	006		3393	272		000848	2 0	170		4531									
			OBS	0150	006	2	33930	272	3				1	4531									
			STD 0200		0103		3405	273		000783	13 (	211		4560									
			OBS	0200	010		34050	273		000676		2,0		4560									
			STD OBS	0250 0250	015 015		3424 34240	274		000676	יס נ	248		4593									
			STD	0300	018		3435	274		000619	1 0	280		4615									
			OBS	0300	018		34350	274						4615									
			STD	0400	019		3446	275		000544	3 0	338		4637									
			OBS	0400	019		34460	275		000511		201		4637									
			STD OBS	0500 0500	016 016		3448 34480	276 276		000511	. 5	391		4642									
			STD	0600	013		3448	276		000492	24 0	441		4647									
			oBs	0600	013		34480	276						4647									

REFERENCE	SHIP			= =	MARS	SOEN	STATION	TIME		ORIGIN	ATOR'S	DEPTH	MA) GEPT		WAVE ERVATIONS	WEA-	Crono			NODC	
CTRY ID.	CODE	LATITU	1/10 L	ONGITUOE	10*		MO DAY		YEAR	NO.	TATION	10 801108	0.5	1 0000	HGT PER SEA	CODE	TYPL AMT			TATION	
318160	WE	7554	ON 0	64040W	259		09 21	215	1969	WE2 00		0600		06	0 2	71	7 8		,	0008	
						COLOR	TRANS. DI	WIND SPEE	WEI	ER DRY	WET C	NO. 085.	OBSER	ECIAL VATIONS							
						CODE	(m)	FOR			BULR	DEPTHS									
	MESSENGI			T	T	DT	S 06	5   516	98	3 -017	₹ △	_'_	UND		PO <sub>4</sub> -P	TOTAL-P	NO. N	NO N	51.0 F		5
	TIME HR 1/10	및 HO.	TYPE	OEPTH (m)	1	°C	s %.	\$10	MA-T	ANOMALT-I		M. VEL	OCITY	O2 ml/l	pg = 01/1	101AL-P	NO3-M	NO3-N µg - at/l	\$1 O4-\$i	рН	c
																					$\prod$
	215		STD OBS	0000		018 018	3100 3100		91	003049	8 000		429 429								
	21,	,	STD	0010	00	061	3200	25	68	002318	7 002	7 14	481								
			OBS STD	0010 0020		061 060	32000 3250		68	001936	6 004		481 489								
			OBS STD	0020 0030		060 025	32500 3298		08	001530	1 006		439								
			OBS	0030	-00	025	32980	26	51			14	458								
			STD 08S	0050 0050		050 050	3328		76 76	001289	8 009		454 454								
			STD	0075		052	3337		84	001219	2 012		459 459								
			OBS STD	0075 0100		052 018	33370 3361		02	001050	0 015		482								
			OBS STD	0100 0125		018	33610 3374		10	000973	6 017		482 509								
			085	0125	0.0	028	33740	27	10			14	509								
			STD OBS	0150 0150		043 043	3380 33800		14	000936	0 020		521								
			STD	0200	00	770	3395	27	24	000842	3 024	7 14	546								
			OBS STD	0200 0250		077 114	33950 3413		36	000731	0 028		546								
			OBS STD	0250 0300		114 165	34130 3428		36 44	000656	2 032	_	574 607								
			OBS	0300	0	165	34280	27	44			14	607								
			STD OBS	0400 0400		171 171	3441		54	000566	4 038		628								
			STD	0500	0	169	3448	27	60	000515	6 043		645								
			088	0500	U		34480														
			STD	0600		150	3448		60	000503	2 048	7 14	653								
					0			27		000503	2 048	7 14									
REFERENCE	5000		STD OBS	0600	O:	150 150	3448 34480 STATION	27 27	61		2 04 6	7 14	653 653	ii l	WAVE	WEA-	CLOUD			NOOC	
REFERENCE CTRY IO. CDDE NO.	SHIP	LATITU	STD OBS	0600	0:	150 150	3448 34480 STATION IGM	27 27	61	ORIGIN CRUISE S		7 14	653 653	H OBSI	WAVE ERVATIONS HGT PER SEA	THER	CLOUD CODES		5	NOOC STATION HUMBER	
CTRY IO.		7553	STD OBS	0600 0600	MARS	150 150 SOEN ARE	3448 34480 STATION IGM MO DAY 09 21	27 27 71ME HR.1/10 238	61	ORIGIN CRUISE SAMO.	ATOR'S	7 14 14	MA) DEPT OF S'MPL	*S OIR.	ERVATIONS	THER	CODES		5	TATION	
CTRY IO.	CODE	•	STD OBS	0600 0600	MARS SOU	DEN ARE	3448 34480 STATION MO DAY MO DAY 09 21 ER	27 27 27 TIME HR 1/10 238 WIND	61 61 YEAR 1969	ORIGIN CRUISE S MO. 1 WE 2 00 D. AIR TE	ATOR'S STATION NUMBER 9 MP. "C WET C	7 14 14 0650 0650 NO. 085.	MAN OEPT OF S'MPL	*S OIR	HGT PER SEA	THER	TYPE AMT		5	TATION	
CTRY IO.	CODE	•	STD OBS	0600 0600	MARS SOU	DEN ARE 1. SOLN WAT COLOR COOE	3448 34480 STATION (GM) MO DAY 09 21 ER   TRANS. DII	27 27 27 27 27 27 27 27 27 27 27 27 27 2	YEAR  1969  BART Imb	ORIGIN CRUISE S HO. S WE 2 00 AIR TE	ATOR'S STATION NUMBER  9 MP. "C WET BULR	7 14 14 14 0650 0650 085. 067113	MAN OEPT OF S'MPL	0851 *S OIR 06	HGT PER SEA	THER	TYPE AMT		5	TATION	
CTRY IO.	WE	7553	STD OBS	0600 0600 0000 0000 0000 0000 1/1/10 65150W	MARS 50U 10° 259	OEN ARE 1: 55 WAT COLOR COOE DT	34480 34480 STATION (GM MO DAY 09 21 ER TRANS, DIII	27 27 27 27 238 WIND 238 WIND 5 S15	YEAR 1969 BART   Imb	ORIGIN CRUISE MO. WE 2 00 AIR TE: CRY SULB 1 -021	ATOR'S STATION HUMBER  9 MP. "C WET BULR  -034	7 14 14 14 10 80170A 0650 085. 0697HS	MAN OEPT OF S'MPL	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	ERVATIONS HGT PER SEA O 2	THER CODE 00	TYPE AM7	NO3N	2	TATION HUMBER 0009	5
CTRY IO.	WE	7553	STD OBS	0600 0600	MARS 50U 10° 259	DEN ARE 1. SOLN WAT COLOR COOE	3448 34480 STATION (GM) MO DAY 09 21 ER   TRANS. DII	27 27 27 27 238 WIND 238 WIND 5 S15	YEAR  1969  BART Imb	ORIGIN CRUISE S HO. S WE 2 00 AIR TE	ATOR'S OTATION HUMBER  9 MP. "C WET BULR  -034 6	7 1414    OEPTH TO ROTTON O 6 5 0   OEST O NO 8 5 0   OEST O S   O	MAN OEPT OF S'MPL	0851 *S OIR 06	HGT PER SEA	THER	TYPE AMT	NO <sub>3</sub> -N yg - at/1	5	TATION HUMBER 0009	S
CTRY IO.	WE WE	7553	STD OBS	0600 0600 0000 0000 0000 0000 0000 000	0: 0: 0: MARS SOU. 10° 259	DEN ARE  1. 55 WAT  COLOR COOE  DT	3448 34480 STATION (GM MO DAY 09 21 ER TRANS. DII S 06	27 27 27 27 TIME HR.1/10 238 WIND SPEEL 5 STS	YEAR  1969  BARET   Imb  98	ORIGIN CRUISE S MO. S WE 2 00 AIR TE ORY BULB 1 - 021 SPECIFIC VOLU ANDMALY—XI	ATOR'S STATION SUMBER  9 MP. 'C WET GULR  -034 6 ME SA O' X 1	7 1414    GEPTH   TO   BOTTON   O 6 5 0 0   O 85. O 0   O 15. O 0	MAA) DEPT OF S'MPL  SP OBSER	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	2000
CTRY IO.	WE WE	7553	STD OBS	0600 0600 0000 0000 0000	0: 0: 0: 0: 3: 10° 2:59	OLO DT	3448 34480 STATION (GM MO DAY 09 21 FR. TRANS. DIII S 06 S '4.	27 27 27 27 27 27 27 27 27 27 27 27 27 2	YEAR 1969 BARR E IND 98 MA-T	ORIGINI CRUISE S HO. I S WE 2 00 D- AIR TE. I BULB 1 -021 SPECIFIC VOLUMANDMALT-EI 003589	ATOR'S  STATION NUMBER  9  MP. TC  WET C  BULR  OTN.  X 1  3 000	7 1414  OEPTH TO BOTTON O650  O650  O85. O85. O85. O85. O85. O85. O85. O85.	MA3 653 653 MA3 OEPT OF STMPL OBSER	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	SCCC
CTRY IO.	WE MESSENGR	7553	STD OBS  DE LUITO ON OF	0600 0600 0000 0000 0000	0 : 0 : 0 : 0 : 0 : 0 : 0 : 0 : 0 : 0 :	OLN ARE SOLN WAT COLOR COOE DT	3448 34480 STATION (GM MO DAY 09 21 ER TRANS. DIII S 06 5 '4.	27 27 27 27 27 27 27 27 27 27 27 27 27 2	YEAR 1969 BARR E IMPE I IMPE 98 MA-T	ORIGIN CRUISE S MO. S WE 2 00 AIR TE ORY BULB 1 - 021 SPECIFIC VOLU ANDMALY—XI	ATOR'S  STATION NUMBER  9  MP. TC  WET C  BULR  OTN.  X 1  3 000	7 1414  OEPTH TO BOTTOM O650  O650  O850 OEPTHS  15 DM SCOOPTHS  O 1414  5 144	MAA) DEPT OF S'MPL OSSER UNO OCITY	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	S C C C
CTRY IO.	WE MESSENGR	7553	STD OBS  DE LO TYPE  STD OBS STD OBS STD OBS STD	0600 0600 0000 0000 0000 0000 0010 0020	0:000000000000000000000000000000000000	150 150 150 OEN ARE 1: 55 WAT COLOR COOR DT © 010 010 010 010 010	3448 34480 STATION GMMO DAY 09 21 FR TRANS DIII S 06 S '4	27 27 27 27 27 27 27 27 27 27 27 27 27 2	YEAR 1969 BART Imb 98 MA-T 35 59 84	ORIGINI CRUISE S HO. I S WE 2 00 D- AIR TE. I BULB 1 -021 SPECIFIC VOLUMANDMALT-EI 003589	ATOR'S  STATION FUMBER  WET BULK  WET O'V  X 1  3  000 6 003	7 14 14 14 14 14 12 14 14 12 14 14 12 14 14	653 653 Dept of the control of the c	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	300 U
CTRY IO.	WE MESSENGR	7553	STD OBS  DE L/10 ON O	0600 0600 0000 0000 0000 0010 0020 0020	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 150 11 155 155 10 10 10 10 10 10 10 10 10 10 10 10 10	3448 34480 STATION (GMM) MO DAY 09 21 ER   TRANS DII S 06 S '4. 3030 3030 3060 3060 3020 3220 3275	277 277 277 278 278 278 278 278 278 278	YEAR 1969  BARE Inhb 98  MA-T 355 355 59 84 84 33	ORIGINI ORIGINA ORIGIN	ATOR'S  ATOR'S  ITATION  99  MP. 'C  WET  SULR  O 34 6  O 50  X 1  3 000  6 003	7 14 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16	653 653 MADENT OF TO OF	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	S C C
CTRY IO.	WE MESSENGR	7553	STD OBS  DE 1/10 ON OO  CARD TYPE  STD OBS STD OBS STD OBS STD OBS	0600 0600 0000 0010 0000 0010 0010 0020 002	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 30EN   1'   55   WAT   1'   55   WAT   1'   1'   1'   1'   1'   1'   1'   1	3448 34480 STATION (GMMO) DAY 09 21 FR TRANS DIII 3030 3030 3030 3030 3030 3220 3220 3275 3275 3275	277 277 TIME TIME TIME TIME TIME TIME TIME TIME	YEAR 1969 SAR MET I I I I I I I I I I I I I I I I I I I	ORIGINIO CRUISE STANDALL STAND	ATOR'S  TATION PUMBER  9  MF. 'C  WET BULR  O' DYN. x 1  3 000  6 002  6 006	7 14 14 14 14 14 14 14 14 14 14 14 14 14	653 653 MAI OBERT OF OBSER OBSER 423 423 429 4483 448	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	SOUC
CTRY IO.	WE MESSENGR	7553	STD OBS	0600 0600 0000 0000 0000 0010 0010 0020 0030 003	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 150 150 150 150 150 150	3448 34480 STATION (GM) MO DAY OBAY O	277 277 TIME HR.1/10 238 WIND COLOR OF ST. SIGN	YEAR 1969 -	ORIGINI CRUISE	ATOR'S  STATION HUMBER  9  MP. 'C  WET C  BULR  O 34 6  O 0 3  6 0 0 3  8 0 0 6  9 0 0 8	7 14 14 14 14 14 14 14 14 14 14 14 14 14	653 653 MAA DEPT OF	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	SCC
CTRY IO.	WE MESSENGR	7553	STD OBS  DE LO OBS  TYPE  STD OBS	0600 0600 0000 0000 0000 0010 0010 0020 0030 003	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150   150	3448 34480 STATION (GMMO OAY O9 21 ER TEMP) OB O O O O O O O O O O O O O O O O O O	277 277 TIME HR.1/10 238 WIND 238 SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN	YEAR 1969 BARK MA-T 98 484 33 33 3666	ORIGINIO CRUISE STANDALL STAND	ATOR'S  STATION HUMBER  9  MP. 'C  WET C  BULR  O 34 6  O 0 3  6 0 0 3  8 0 0 6  9 0 0 8	7 14 14 14 14 14 14 14 14 14 14 14 14 14	653 653 MAAD OEPT OF OF OF OSSER OBSER 423 429 429 483 4483 4484 448	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	AUU
CTRY IO.	WE MESSENGR	7553	STD OBS  DE 1/10  ON O.  CARD 1/10  STD OBS	0600 0600 0000 0000 0000 0010 0010 0020 0030 0050 0050 0075 0075	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 150 150 150 150 150 150	3448 34480 STATION (GM MO DAY O D	277 277 277 277 277 277 277 277 277 277	YEAR 1969  SARE Inhb 98  MAA-T 35 35 35 59 84 84 33 3666 667 87 78	ORIGINI CRUISE	ATOR'S  STATION PUMBER  9  MF. 'C  WET  SULR  OF  SULR  3  000  6  003  8  006  9  006  4  011	7 14 14 14 14 14 14 14 16 14 16 14 16 14 14 16 16 16 16 16 16 16 16 16 16 16 16 16	653 653 MAA) DEPT OF	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	5500
CTRY IO.	WE MESSENGR	7553	STD OBS  OE 1/10  ON O  CARD TYPE  STD OBS	0600 0600 0000 0000 0010 0010 0020 0030 0050 0050 0075 0075 0100 0125	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 150 150 150 150 150 150	3448 34480 STATION (GMMO) DAY 09 21 FR TRANS DIII 3030 30300 30300 3220 3275 3314 3314 3329 33275 3314 3329 3347 3347 3347 3347 3347 3347 3347	277 277 11ME HR.1/10 238 WIND 3FEE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	YEAR 1969  BARETINA 98  MAA-T 35 35 559 84 84 84 83 33 66 66 67 8 91 90 00 00 00 00 00 00 00 00 00 00 00 00	ORIGINI CRUISE S MO. 1 WE 2 OO ARR TELE S ULB 1	ATON'S  STATION HUMBER  9  MP. 'C  BULR  C  BULR  C  SYN  X1  3  000  6  003  8  004  9  014  117  1014	7 14 14 10 10 10 10 10 10 10 10 10 10 10 10 10	MAN) OBSTER UNO OCCITY 423 4429 4483 4448 4442 453 4470 493	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	S C C
CTRY IO.	WE MESSENGR	7553	STD OBS  DE 1/10  ON O.  CARD 1/10  ON O.  CARD 1/10  OBS STD	0600 0600 0000 0000 0000 0010 0010 0020 0030 0050 0050 0075 0075 0100 0100 0125 0125	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 150 150 150 150	3448 34480 STATION (GM MO DAY O D	277 277 277 278 278 278 278 278 278 278	YEAR 1969 98 MAA-T 335 559 584 884 333 3366666778 891 991 991 992 002	ORIGINI CRUISE 3 HO. 1 WE 2 00 DR AIR TE. SPECIFIC VOLUM ANDMALT-11 003589 003358 002162 001699 001388 001276 001147	ATON'S  ATON'S  TATION  9  MP. TC  WET  SULR  3  000  6  003  8  000  9  014  17  014  3  020	7 14 14 14 14 14 14 14 14 14 14 14 14 14	653 653 MAN DEPT OF FOR TO	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	S C C
CTRY IO.	WE MESSENGR	7553	STD OBS  OR 1/10  ON O	0600 0600 0000 0010 0010 0010 0020 0030 0050 0075 0075 0100 01100 0125 0150	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 150 150 150 150 150 150	3448 34480 STATION (GMMO) DAY 09 21 FR TRANS DIII 3030 3030 3030 3030 3030 3220 3275 3275 3314 3316 3316 3316 3316 3316 3316 3316 3316 3317 3316 3317	277 277 TIME HR.1/10 238 WIND STEEL PROPERTY OF TAXABLE PROPERTY O	7548	ORIGINI CRUISE : NO.   1	ATOR'S  STATION PUMBER  9  MF. 'C  WET C  BULR  O' DYN.  x 1  3 000  6 003  8 006  9 008  4 011  7 014  3 01  3 020  6 022	7 14 14 14 14 14 14 14 14 14 14 14 14 14	MAN DEPT OF	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	SCC
CTRY IO.	WE MESSENGR	7553	STD OBS	0600 0600 0000 0000 0010 0010 0020 0030 0030 00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 150 100 100 100 100 100	3448 34480 STATION (GM) MO DAY O	277 277 TIME  HR,1/10 238  STEET  SIGN  SI	1969 YEAR 1969 BARKETIND 98 MAA-T 35 559 84 333 336 666 666 778 991 902 002 008	ORIGINI CRUISE 3 HO. 1 WE 2 00 DR AIR TE. SPECIFIC VOLUM ANDMALT-11 003589 003358 002162 001699 001388 001276 001147	ATOR'S  STATION PUMBER  9  MF. 'C  WET C  BULR  O' DYN.  x 1  3 000  6 003  8 006  9 008  4 011  7 014  3 01  3 020  6 022	7 14 14 14 14 14 14 14 14 15 15 15 15 15 15 15 15 15 15 15 15 15	MAN DEPT OF THE PROPERTY OF TH	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	SUC
CTRY IO.	WE MESSENGR	7553	STD OBS	0600 0600 0600 0000 0010 0010 0020 0030 0050 0075 0075 0100 0125 0125 0150 0220 0220 0220	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 150 150 150 150	3448 34480 STATION (GMMO) DAY (GMMO) DA	277 277 TIME   HR.1/10   238   SIGN	61 61 1969 8 MARTI 1969 98 MAA-T 35 35 35 35 559 559 84 83 33 33 66 66 67 78 77 89 190 200 200 200 200 200 200 200 200 200 2	ORIGINI CRUISE : NO.   1	ATOR'S  STATION SUMBER  9  MP. 'C  BULR  O 3 4 6  O 0 3  8 0 0 6  9 0 0 6  4 0 1 1  7 0 1 4  3 0 1 6  6 0 2 2  2 0 2 5	7 144 14 144 144 144 144 144 144 144 144	MAN DEPT OF THE PROPERTY OF TH	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	S C C
CTRY IO.	WE MESSENGR	7553	STD OBS  OE 1/10  ON O  CAND 17/16  STD OBS	0600 0600 0600 0000 0000 0000 0010 0010	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 150 150 150 150 150 150	3448 34480 STATION (GM) MO DAY O	277 277 TIME   HR.1/10   238   STG   244   25   25   25   25   25   25   2	YEAR  1969	ORIGIN OR	ATOR'S  TATION  WET  SULR  WET  SULR  OF  N  1  3  000  6  002  8  004  1  1  1  1  1  1  1  1  1  1  1  1  1	7 144 144 144 144 144 144 144 144 144 14	653 653 0EPT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	SCC
CTRY IO.	WE MESSENGR	7553	STD OBS  OR 1/10  ON O  CARD 11/10  ON O  CARD 11/10  ON O  STD OBS	0600 0600 0000 0000 0010 0010 0010 0020 0030 0050 0075 0100 0125 0125 0150 0200 0200 0200 020	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 100 100 100 100	3448 34480 STATION (GMMO) PAT (	27 27 27 27 27 27 27 27 27 27 27 27 27 2	754AR 1969   SART   SAR	ORIGIN MO. CRUISE STATE OF THE PROPERTY OF THE	ATON'S  STATION HUMBER  9  MF. TC  WET C  BULR  C  O' DYNA  X 1  3  000  6  003  8  004  9  014  101  7  014  3  01-  3  020  6  022  1  039	7 144 144 144 144 144 144 144 144 144 14	MAN DEPT 1 STMP! UNO OCITY 423 4429 4483 4484 442 4453 470 479 3506 5538 5576	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	S U U
CTRY IO.	WE MESSENGR	7553	STD OBS  DE 1/10 ON O ON	0600 0600 0000 0000 0000 0010 0010 0020 0030 0050 0050 0050 0050 0125 0125 0120 0200 020	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 150 150 150 150	3448 34480 STATION (GM MO DAY O D	277 277 TIME   HR.1/10   238   STEEL   1   1   1   1   1   1   1   1   1	754AR 1969 98 MAA-T 335 559 884 433 33 366 666 667 78 81991 2002 2008 802 22 22 23 30 02 44 22 24 42 25 55 55	ORIGINI CRUISE   ORIGINI WE 2   OO   ORIGINI WE 2   OO   ORIGINI WE 3   OO   ORIGINI OO   OO   OO   OO   OO   OO   OO   OO	ATOA'S  STATION SUMBER  9  MP. TC BUR  O 34 6  003  8 006  9 006  4 011  7 014  3 01  3 020  6 022  1 031  2 035  6 041	7 144 144 15 144 144 144 144 144 144 144 144 144 144	653 653 DEPT OBSER 0 SSER 0 SSER 423 4429 4429 4429 4483 4484 4484 4493 4470 4493 5506 5506 5576 5599 6632	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE 00	TYPE AMT		SI 04-Si	TATION HUMBER 0009	STOC
CTRY IO.	WE MESSENGR	7553	STD OBS  DE 1//10  ON OO  CARD TYPE  STD OBS	0600 0600 0600 0000 0010 0010 0010 0020 0030 0050 0050 0050 0150 0150 0250 0250 025	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	150 150 150 150 17 17 17 18 19 19 10 10 10 10 10 10 10 10 10 10	3448 34480 STATION (GMMO) PAT (	277 277 TIME   HR.1/10   238 W WIND   STEEL   1   1   1   1   1   1   1   1   1	7548 1969 98 MAA-T 335 5.59 91 91 991 991 991 991 991 991 991 991	ORIGIN MO. CRUISE STATE OF THE PROPERTY OF THE	ATON'S  TATION  TO MARKET  9  MF. TC  WET BULK  O' DYN.  x 1  3 000  6 002  6 003  6 004  1 011  3 01  3 02  1 031  2 035  6 046	7 144 14 144 144 144 144 144 144 144 144	MAN DEPT 1 STMP!  OBSER  UNO OCCITY  4 23 4 4 29 4 4 29 4 4 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	OBSI OBSI OBSI OBSI OBSI OBSI OBSI	PO4-P	THER CODE OO	TYPE AMT		SI 04-Si	TATION HUMBER 0009	- UU0-

REFERENCE	SHIP	LATITUI	ne LO	NOCIE POUTE	MARSDEN SQUARE	STATION (GMT	TIME	YEAR	h	STATIO		DEPTH	DEPTI		WAVE RVATIONS	WEA- THER	CLOUD		S	NODC	
CODE NO.	CODE	•	1/10	1/10 0 2	10" 1"	MO OAY	HR.1/10		NO.	NUMI	BER	BOTTOM	S'MPL		HGT PER SE		TYPE AMI			UMBER	
318160	WE	7542	ON 106	5200W	259 55 WA	09 22 TER	021 WINO	1969	A ID TI	O MP. 1	c .	0570 NO.		ECIAL	0  2	1 00	7   8	1	1	0010	
					COLOR	TRANS. DIR	SPEE OR FOR	O METI	ER DRY	BU		OBS. OEPTHS	ORSER	VATIONS							
					ОТ	s 06			2 -006	-01	116	14									
	MESSENGR	CAST NO.	CARO	DEPTH (m)	ī °c	5 %.	\$10	T-AM	SPECIFIC VOL		₹ △ D	. SOL	OCITY	02 ml/l	PO4~P pg • ol/l	10TAL-P UQ - 01/1	NO2-N ug - at/l	NO3-N	\$1 O4-\$1	рН	200
	HR 1/10	1 10.					+			$\dashv$	x 10 <sup>3</sup>	111			78	70	7	pg - 01//	20		+
	1	1 1	STD	0000	0053	3265		521	001819	0 '	0000		485	'	'	'				•	1 '
	021	L	OBS STD	0000 0010	0053 0048	32650 3266		521 522	001808	37	0018		485 484								
			OBS	0010	0048	32660 3292		522	001601	2	0035		484 481								
			STD OBS	0020 0020	0030	32920	20	544				14	481								
			STD OBS	0030	-0063 -0063	3327 33270		576 576	001293	3 2	0050		445 445								
			STD	0050 0050	-0076 -0076	3343 33430		589 589	001165	51	0074		444								
			STD	0075	-0036	3365	2	706	001012	20	0101	14	470								
			OBS STD	0075 0100	-0036 0003	33650 3375		706 7 <b>1</b> 2	000953	34	0126		470 494								
			OBS	0100 0125	0003 0035	33750 3385		712 718	000893	3.7	0149		494 514								
			STD OBS	0125	0035	33850	2	718				14	514								
			STD OBS	0150 0150	0057 0057	3389 33890		720 720	000875	57	0171		528 528								
			STD	0200	0100	3405 34050	2	730 730	000781	13	0213		558 558								
			OBS STD	0200 0250	0100 0154	3424	2	742	000676	5	0249	14	593								
			OBS STD	0250 0300	0154 0189	34240		742 749	000614	+7	0281		593 619								
			OBS	0300	0189	34360		749	000566	. ^	0340		619 636								
			STD OBS	0400 0400	0189 0189	34430	2	755 755				14	636								
			STD OBS	0500 0500	0155 0155	3447 34470		760 760	00051	16	0394		638 638								
REFERENCE	SHIP			- #	MARSDEN	STATION	TIME		ORIGI	NATO	8'5	DEPTH	M AX		WAVE	WEA-	Crono			NOOC	
CODE NO.	CODE	LATITUI	1/10 LO	MGITUDE BO	SOUARE 10° 1°	MO DAY		YEAR	CRUISE NO.	STATI		OT MOTTOB	1 00	1	HGT PER SE	THER	TYPE AM		5	UMBER	
318160	WE	7532	ON 06	5240W	259 55	09 22	038	1969				0140		06	0 2	00	7 8			0011	
					COLOR	TRANS OIL	SPEE	D BAR	ER DRY	w	ET COO	NO. OBS. DEPTHS	SP OBSER	ECIAL VATIONS							
					CODE	(m)	FOR	25 0110	_	-0:			-								
	MESSENGE	CAST	CARD	1	DT	S  06	$\top$		8 -006	1	₹ △ ٥	80	UND		PO4-P	TOTAL-P	NO <sub>2</sub> -N	NO3-N	SIO4-Si	1	5
	HR 1/10	약 NO.	TYPE	OEPTH (m)	7 %	s */	210	GMA-T	ANOMALY-	1107	2 10 <sup>3</sup>		OCITY	O2 ml/l	μg = et/1	µg - α1/1	pg - p1/l	μg - σ1/l	µg - m1/l	рН	c
		1 1	CTD	0000	0080	3260	1	515	00187	12	0000	1.6	496							l	
	038	3	STD OBS	0000	0080	32600	2	515				14	496								
			STD	0010 0010	0068 0068	3260 32600		516 516	001864	+7	0019		492 492								
			STD	0020	-0040 -0040	3325		573	00131	79	0035		454								
			OBS STD	0020 0030	-0057	33250 3333	2	673 681	001249	96	0047	14	454 448								
			085 STD	0030 0050	-0057 -0069	33330 3357		581 700	001060	06	0071		448 449								
			OBS	0050	-0069 -0035	33570	2	700				14	449 473								
			OBS	0075 0075	-0035	3381 3381	2	718 718	000890		0095	14	473								
			STD	0100 0100	0030	3386 33860		719 719	000883	36	0117		507 507								
			STD	0125	0045	3389	2	721	000868	8 8	0139	14	519								
			OBS	0125	0045	33890	, 2	721				14	519								

FEI	ID. NO.	SHIP	T	LATITUO	E LO	NGITUOE	DRUFT	MA SQ:	RSDEN UARE		TION TO	`	reas	CRUIS NO.	:	STATION NUMBER		DEPTH TO ROTTON	MAX, DEPTH DF S'MPL'S		WAVE SERVATION	DNS	CODE THER WEA-	CLDU	5		NDDC STATION NUMBER	
1	8160	WE	17	5220	N 06	5290W		259	9 55		22 0	54 1	969 8ARC			2 MP. ℃	$\Box$	0200	T	EIAL			85	7 9		1	0012	
									COLOR		DIR	SPEED OR FORCE	METE	R	DRY BULB	WET RULR	COOE	OBS. DEPTHS	DASERV									
									DT	5	04	S11	96	1 -0	04	-011	6	10										
		MESSENG TIME HR 1/1	at.	CAST NO.	CARD TYPE	DEPTH	m1		T °C	,	٠/	SIGM	A-T		C VOLU	107 D	△ D N. M ( 10 <sup>3</sup>		DCITY	D <sub>2</sub> ml/l	PD4		701AL—P 1/10 - gu	NO2-N µg - a1/				s C C
		****	-					$\top$																				T
	i			'	STD	0000	0	٠ (	0050	32	50	260	9 '	001	932	0 0	000	14	481		•	Ċ			•			
		0.5	54		OBS	0000	0	(	0050	32	500	260	9						481									
					STD	0010			0040		53	261		001	903	9 0	019		479									
					OBS	0010			0040		530	261					226		479									
					STD	0020			0060	-	10	266		00	424	9 0	036		442									
					OBS	0020			0060		100 34	266 268		001	221	a n	049	_	421									
					STD OBS	0030			0115		340	268		00		, ,	<b>,</b> ,		421									
					STD	005			0081		52	269		001	094	4 0	072		443									
					OBS	005			0081		520	269						14	443									
					STD	007			0019		70	270		000	981	5 0	098	14	479									
					OBS	007			0019	33	700	270	9					14	479									
					STD	010	0	(	0015	33	77	271	3	000	944	2 0	122		499									
					OBS	010	D	(	0015	33	770	271	3						499									
					STD	012	5	(	0055		90	272	1	000	866	9 0	145		523									
					OBS	012			0055		900	272					_		523									
					STD	015			0072		94	272		000	846	6 0	166		536									
					OBS	015			0072		940	272			010		200		536									
					STD	020			0099	_	00	272		000	818	5 0	208		557									
					OBS	020	U	(	0099	34	000	272	6					14	557									

ERENCE	SHIP					MARSDEN	A72	TION TI				_	NATOR'S	_	DEPTH	MAR. DEPTH	Dat	WAVE		WEA-	CLDUC		- 1.	NDDC	
ID.	CODE	LATITUE		NGITUDE	ğ	-				YEAR	CRUIS ND.		STATION		TO ROTTON	S'MPL"	1	HGT PE		CODE	TYPE AN			STATION NUMBER	
140.	1		1/10	1/10	+	10. 1.	MO	DAY H	K,1/10		110.	+	140 M BER	_		<del>                                     </del>	S LIIC	HGI PEI	364			1			1
8160	IWE I	75110	) N   Q 6	5340W	12	59 55		22 0		969	WE:				0250	ļ	Ь,	L	1	85	7 9	1	-	0013	d
							TER	_	SPEED	BARO			MP. ℃	21V	NO. 085.		CIAL								
						CODE			FORCE	(mbs)		ORY RULR	BULR	COOE	DEPTHS	ORSERV	ATIONS								
						0.7	1	04	511	063		004	-011	6	11										
						DT	<u>  S</u>	104	511	961	'	004	<del></del>	1.	11	L		<del>_</del>		Т		т—		1	7
	MESSENGR TIME (		CARD TYPE	DEPTH (m	,	1 %		s °/	SIGM	A-T		MALY-X	107 0	∆ D YN. M. X 10 <sup>3</sup>		OCITY	D2 ml/	PO4		TOTAL-P yg - at/l	NO2-N PB - at/I				S
					-																				$\top$
	1	1 1	STD	0000	ı	0060	32	220	258	4	00	2165	9 0	000	14	482		'	'	'		1	'		٠,
	069		OBS	0000		0060		2200	258		• • •					482									
	•••		STD	0010		0052		238	259		00	2024	3 0	021	14	482									
			OBS	0010		0052	32	2380	259	9					14	482									
			STD	0020		-0100	33	315	266	8	00	1372	8 0	038	14	424									
			OBS	0020		-0100	33	3150	266	8					14	424									
			STD	0030		-0121	33	331	268	1	00	1243	1 0	051	14	418									
			OBS	0030		-0121		3310	268					_		418									
			STD	0050		-0096	_	347	269	-	00	1127	73 0	075		436									
			OBS	0050		-0096		3470	269							436									
			STD	0075		-0028		367	270		00	1000	03 0	101		474									
			OBS	0075		-0028		3670	270			0000		126		474									
			STO	0100		0007	_	382	271		00	0902	:1 0	125		496									
			OBS	0100 0125		0007 0057		3820 391	271 272		00	0860	16 0	147		524									
			085	0125		0057		3910	272		00	0000	,, ,	141		524									
			STD	0150		0075		397	272		00	0825	57 O	168		538									
			OBS	0150		0075		3970	272		30	002		-00		538									
			STD	0200		0119		408	273		00	0771	13 0	208		567									
			OBS	0200		0119	_	4080	273	_						567									
			STD	0250		0160		+21	273		00	0703	36 0	245		595									
			OBS	0250		0160		4210	273	-						595									

																	MAX.	_		AVE			CLOUC				7
REFERENCE	SHIP	LATITU	IDE	LONG	SOUTE		SDEN	STAT	ION T	IME	YEAR	CRUISE		ATOR'S		DEPTH	DEPTH	0		VATION	ıs	WEA-	CODES			STATION	
CDOE NO.	CODE	•	1/10		17/10	5 H 10°	1.	MO	DAY I	4R,1/10		NO.		UMRE		BOTTON	S'MPL"	DIR	HG	T PER	SEA	CDDE	TYPE AM	T		NUMBER	1
21016	0 45	7502	ON	045	350W	259	55	no	22	084	1969	WE2	01	4		0310						85	8 7			0014	,
31816	OI WE	17502	UN I	000	350W	1200		TER		WIND	BAR		AIR TEA		Τ.	NO.	1	CIAL	٦`						·		
								R TRANS	DIR.	SPEED	MET	R I	DRY ULB	WET	CDDI	ORS.	OBSSEV		S								
							CDDE	+	-	FDRC		-			+-	-			-								
							DT	S	05	512	96	1   0	03	-00	2	12	1		4		_	-					
	MESSENG TIME HR 1/1	T ND.	CAR TYP		DEPTH U	m)	2°	s	*/	SIG	MA-T	SPECIFIC	ALY-X1		≹ Δ D DYN. M χ 10 <sup>3</sup>		DOULY DOULY	D2 m1	1/1	PO4-P µg - 01/		DTA L—P 10 - 01/1	NO2-N µg - 01/1	ND3~N yp - al/l	SI D4-		S
	178 171	<u> </u>																									
	ı	1	ST	rn	0000	, ' c	053	32:	26	25	89	002	116	6 (	0000	14	479		- '					•	,		
	08	4	085		0000		053		260		89					14	479										
			ST		0010		053	32			10	002	009	5 (	0021		483										
			085		0010		053		400		01			_ ,			483										
			ST		0020		100	33			72	001	326	8 (	0037		425										
			085		0020		100	33	210		72 82	001	235	7 (	0050		419										
			085		0030		120		320		82	001	237	'	,,,,		419										
			ST		0050		102	33			93	001	133	0 (	0074		433										
			085	-	0050		102	_	460		93					14	433										
			ST		0075	5 -0	071	33	54	27	06	001	005	3 (	0101		454										
			085	5	0075	5 <b>-</b> 0	071		640		06						454										
			ST		0100		005	33			15	000	923	9 (	0125		495										
			085		0100		005		790		15				. 1		495										
			ST		0125		042	33	90 900		22	000	859	0 (	0147		518										
			085 ST	-	0129		042	33			26	000	823	7 (	168		542										
			085		0150		084	_	980		26	000	023	'			542										
			51		0200		149	34			38	000	716	8 (	0206		582										
			085		0200		149	-	180		38					14	582										
			51		0250		187	34	30	27	44	000	656	5 (	0241		609										
			085	5	0250	) (	187	34	300	27	44						609										
			51		0300		203	34			51	000	596	0 (	0272		625										
			085	5	0300	) (	203	34	400	27	51					14	625										

RY DE	ID.	SNIP	LATITU	DE LD	NGITUDE	MARS SDU	DEN ARE	TATE OI OM	GMTI		YEAR	CRUISE ND,		TDR'S ATION UMBER		DEPTH TD BOTTON	MAX, DEPTH DF S'MPL"	Dese	VE ATIONS PER SEA	WEA- THER CODE	CD DES			NDDC STATION NUMBER
+	3160	WE	7451		5410W	259		09 2 TER	2 1		969 BARC METE Imbs	WE2		5	VIS.		SPE	CIAL	100	85	7 7	1		001
							ŊΤ	s	05	512	96	1 0	03	-002	<u>L</u>	13	L,						_	
		MESSENGR TIME G HR 1/10	CAST NO.	CARD TYFE	DEPTH (m)	1	℃	s	٠/	SIGM	iA-T		ALY-XIG	7 0	∆ D YN, M x 10 <sup>3</sup>	30	DCITY	0 <sub>2</sub> ml/l	04-P 3 - 81/I	TOTAL-P ug - ol/I	NO2-N µg - at/l	ND3-N pg - al/l	SI D4-5	
										T														
		•		STD	0000		045	321		258		002	196	7 0	000		474							
		100		OBS	0000		045	321 321		258 258		002	1806		022		474 475							
				ST0 08S	0010 0010		044 044	321		258		002	1000	, ,	022		475							
				STO	0020		070	331		266		100	4212	0	040		437							
				085	0020		070	331		266							437							
				STO	0030	-0	118	333		268	34	001	2133	3 0	053		420							
				085	0030		118	333		268				_			420							
				STD	0050		127	335		269		001	0944	+ 0	076		421							
				08S STD	0050 0075		127	335 335		269		001	0355		103		421 432							
				085	0075		115	335		270		001	000.	, ,	200		432							
				STD	0100		010	337		271		000	9470	0	128		488							
				OBS	0100	-0	010	337	50	271	12					14	488							
				STD	0125	-	052	338		271		000	888	0	150		522							
				085	0125		052	338		271							522							
				STO	0150		086	340		272		000	809	7 0	172		543 543							
				08S ST0	0150 0200		086 140	340 341		272		000	7330		210		577							
				085	0200		140	341		273		000	, , , )	, 0	-10		577							
				STO	0250		185	343		274		000	6549	9 0	245		608							
				085	0250		185	343	00	274	+4					14	608							
				STO	0300		204	344		279		000	5893	3 0	276		626							
				085	0300		204	344		279							626							
				STD	0400		203	344	•9 •90	275		000	5326	0	332		643 643							

															Luzz	_				1				
FERENCE	SHIP	LATITU	DE LI	DNGITUDE E	MARSD	EN E	STATII	DN TIA	AE YEAR			ATOR'S		DEPTH	DESIS		WAVE		WEA-	CLDUI	5	, l	NODC TATION	
ID.	CODE	•	1/10	1/10			MD D			CRU	D.	TATION		BOTTO	A S'MPL	'S DIR.	NGT PE	R SEA	CODE	TYPE AP	_!		UMBER	
10160	WE	7441	EN 04	65490W					15 1969	. WE	2 01	6		0970					03	8 7			0016	
18160	I WE I	7441	DN I UC	55490W1 1	2391	WAT		-	IND BAS		AIR TE			ND.	T		' '	'	1 05	. 0.1	'	'	0010	
						OLOR		DIR.	SPEED MET	ER	DRY	WET	CODE	OBC	DOCED	ECIAL VATIONS								
					C	ODE	lm1		FORCE (mb	18.7	8ULB	8078	-	DC1 1111										
						DΤ	S	10	507 96	0	-006	-011		18	<u>L</u>						,			
	MESSENGR		CARD	DEPTH (m)	т,	c	5	·/	SIGMA-T		CIFIC VOLU	ME	YN, M	sc	UND	O2 ml/1	PD4	_P 1	OTAL-P	NO2-N	NO3-N	SI D4-Si	pH	S
	11ME NR 1/10	NO.	TYPE	001111 0	'		-	•••	JOMA-1	AN	GWALY-X	۰′   ۱	X 103	, AEI	OCITY.	02	νg −	a1/i	μg - α1/l	\to - gu	yg - a1/1	μg - at/I	pri	č
																								Т
	1	' '	STD	0000	00:	84	320	0	2567	00	2330	8 C	000	14	490							,	'	'
	119		085	0000	00		320		2567						490									
			STO	0010	00	78	320	0	2567	00	2327	4 0	023	14	489									
			085	0010	00.		320		2567						489									
			STD	0020	-00		332		2676	00	1296	8 0	041	-	427									
			085	0020	-00		332		2676				٠.,		427									
			STD	0030	-01		333		2683	00	1228	9 0	054		420									
			OBS	0030 0050	-01 -01	_	333		2683 2691	0.0	1144	٠ ،	078		420									
			STD 085	0050	-01		334		2691	00	11144	6 0	U ro		415									
			STD	0075	-014		335		2699	0.0	1072	9 0	105		418									
			OBS	0075	-014		335		2699		,10,2	,	-03		418									
			STD	0100	-010		336		2708	0.0	0985	7 0	131		444									
			085	0100	-010		336		2708						444									
			STD	0125	-00	17	337	0	2709	0.0	0981	2 0	156	14	488									
			085	0125	-00	17	337	00	2709					14	488									
			STD	0150	00	22	338	8	2721	0.0	00863	6 0	179		512									
			085	0150	00:		338		2721				_		512									
			STD	0200	010	-	340		2731	0.0	00776	4 0	220		560									
			OBS	0200	010		340		2731		<b></b> .				560									
			STD	0250	016	-	342		2745	00	0650	8 0	256		596									
			OBS	0250	010		342	-	2745 2756	0.0	0550	2 0	286	_	596									
			STD OBS	0300 0300	019		344		2756	0.0	10350	2 0	200		622									
			STD	0400	024		345		2760	0.0	00521	5 0	339		661									
			OBS	0400	024		345	-	2760	•	,,,,,,				661									
			STD	0500	021	. –	345		2760	0.0	0520	6 0	391		675									
			OBS	0500	02:		345	-	2760						675									
			STD	0600	020	8 0	345	3	2761	0.0	0516	0 0	443	14	679									
			OBS	0600	020	8 0	345	30	2761						679									
			STD	0700	016		345		2762	0.0	0500	3 0	494		678									
			085	0700	016		345		2762						678									
			STD	0800	01		344		2765	0.0	00469	1 0	542		670									
			OBS	0800	01	-	344		2765	0.0	00663	4 0	500		670									
			STD	0900	00.		344	_	2767	00	0443	0 0	588		667									
			OBS	0900	00.	10	344	00	2767					14	667									

REFERENCE	SHIP	I A TITU	Dr.	LONGITUOS	E S MA	RSDEN UARE	STA	TION T		YEAR	L	ORIGIT			OEPTH	MAX			AVE VATION	,	WEA-	CLOUD			NODC	1
CODE NO.	3000	LATITU	1/10	LONGITUOE '1/10	12 51				łR,1/10	IEAR			MUN		ROTTON	0.5	"		T PER		COOE	TYPE AM	1		STATION NUMBER	
310360	W.C.	7447			25		09		159 1	969	14	E2 01	7		2010		3.				00	68			0017	
318160	I WE 1	7442	UNIC	067200W	1 125	WA			NINO 139.11	BAR		AIR TE			1010 NO.			٦, ١	141	- 1	00	1 0 0	'	'	0017	1
						COLOR	TRANS	OIR.	SPEED	MET	ER	DRY	BU		0.00	02220	ECIAL VATION	ıs								
						-	1	+-	FORCE	(mb	-		+-	_	-	-		-								
						DT	S	32	510	96	8	-006	-0:		19			4		_						
	MESSENGR		CARD TYPE	DEPTH	im)	T *C	s	٠/	SIGM	A-T	SPE	CIFIC VOL	UME 107	₹ A D	SOI	OCITY	O <sub>2</sub> m	1/1	PO4-P		TAL-P	NO2-N ug - at/l	NO3-N	5104-		č
	HR 1/10				_		-				⊢		_	x 10 <sup>3</sup>	1	00.111		-	yg * 61/	1 1/8	a - o1/i	10 - at/1	μg = al/l	μg - αl.		19
										_			_					-		]	- 1			!		- [ ]
	159	1	OBS	0000		0140	32	24 240	258 258		0	02179	8	0000		518 518										
	109	,	ST			1133	32		259		01	02023	34	0021		519										
			OBS	001		133	32	440	259	9					14	519										
			ST	_		0063	33		266		0	01423	8	0038		441										
			OBS	0020		0063		100	266					0051		441										
			STC OBS	0030		130	33	35 350	268 268		01	01209	8	0051		415 415										
			STE	_		150	33		269	-	01	01087	9	0074		411										
			OBS	0050		150		500	269							411										
			ST			164	33		270		0	00982	8	0100		410										
			OBS	0079		164		630	270		_					410										
			OBS	0100		)152 )152	330	680 680	271 271		00	00946	1	0124		420 420										
			STO			139	33		271		01	00894	9	0147		432										
			OBS	012		139	33	750	271							432										
			ST			060	33		272		0	00808	5	0169		475										
			OBS	0150		0060	33	900	272		0.	00700		0207		475 535										
			OBS	0200		046	_	100	273	-	U	00709	' '	0207		535										
			STC			108	34		274		00	00643	6	0240		573										
			OBS	0250		108		240	274							573										
			STC			137	34:		275		00	00597	3	0272		595										
			OBS STD	0300		0137 0185	34	330	275 276		0.	00510		0327		595										
			OBS	0400		185		500	276		01	00510	1	0321		635 635										
			STO			181	34		276		00	00488	2	0377		651										
			OBS	0500	) (	181	34	530	276	3					14	651										
			ST			154	34		276		00	00476	5	0425		655										
			OBS	0600		154	34	520	276		0	00666	_	0472		655										
			OBS	0700		)121 )121	_	500	276 276		U	00466	9	0472		657 657										
			ST			080	34		276		0.0	00443	0	0518		655										
			OBS	080		080		490	276							655										
			STO			055	34		276		00	00439	0	0562		660										
			OBS	0900		055	_	470	276			00/07		060-		660										
			STI OBS	1000		0040	34	47 470	276 276	-	01	00427	5	0605		670 670										
			003	1000	,	,040	5-41	+10	210	U					14	010										

FERENCE	SHIP				- <b>E</b>	MARSDEN	STAT	ION TI		T	ORIO	INATO	DR"S	DEPTI	M A DEPT		WAVE	W	EA-	CLOUD			2000	
Y ID.	CODE	LATITUE		DNGITUDE	NO NO	SOUARE		(GMT)		AR C	RUISE	STAT		BOTTO	OF	1	SERVATION		HER	CODES		51	UMBER	
NO.			1/10	17/10	-1	10° 1°	MO	H YAD	R.1/10	-	NO.	NUA	ABER	00110	M S¹MPL	."S DIR.	HGT PER	SEA		TYPE AM	Т	N	OWBER	
18160	WE	74520	N O	57150W				22 1	75 19	169	WEZ C	18		1000		00	00	7	73	6 7			0018	
						WA		+	/INO	BARO-	A 1R	TEMP.	°C VI	NO.	\ c=	ECIAL								
						COLOR	TRANS.	OIR	OX I	METER (mbs)	DRY		VET CO		OBSER	VATIONS								
						0001	,,,		FDRCE			-		+	1									
						DT	S	00	500	975	-006	-0	11 7	19			<u> </u>							
	MESSENGR TIME	CAST	CARD	DEPTH U		1 °C	١,	٠/	SIGMA		PECIFIC VO	LUME	₹ Δ 0	S	מאטכ	O2 m1/	, PO4-P	IDTA	L-P	NO2-N	№03-Н	SI O4-Si		5
	HR 1/10	NO.	TYPE	DEFIN 0	"7	, ,	′		310.00	-'	ANOMALY	_X107	OYN. / X 10 <sup>3</sup>	,, \ VE	LOCITY	02 mi/	yg - a1/			ا/اه - وبر	yg = ol/1	yg - a1/1	pН	č
				1																				+1
	ı	1 1	CTD	1 0000		0000	220	1 2	2540	, '	00221	25	0000			ı	1	1	'		I	ı	,	1 1
	175		STD	0000		0080 0080	320		2569 2569		00231	30	0000		4488									
	115		STD	0010		0800	320		2571		00229	04	0023		4490									
			OBS	0010		0800	320		2571		0022)	0 7	002.		4490									
			STD	0020		-0120	331		2668		00136	67	004		4415									
			OBS	0020		-0120	331	150	2668						4415									
			STD	0030		-0157	333	33	2684		00121	80	0054	14	4402									
			obs	0030		-0157	333	330	2684	,				14	4402									
			STD	0050		-0155	335	50	2698	}	00108	66	0077	14	4408									
			OBS	0050		-0155	335		2698						4408									
			STD	0075		-0163	335		2702		00104	45	0104		4409									
			OBS	0075		-0163		550	2702						4409									
			STD	0100		-0152	336		2708		00098	45	0129		420									
			OBS	0100 0125		-0152	336		2708		00093	10	0153	_	420									
			OBS	0125		-0145 -0145	337		2713		00093	10	0153	_	428 428									
			STD	0150		-0087	338		2723		00084	21	0179		461									
			OBS	0150		-0087	338		2723		00004	J <u>1</u>	011.	_	461									
			STD	0200		0028	340		2733		00075	24	0215		525									
			OBS	0200		0028	340		2733					_	525									
			STD	0250		0092	342	21	2744		00065	55	0250	14	565									
			OBS	0250		0092	342	019	2744					14	+565									
			STD	0300		0134	343	35	2752		00058	00	02B1	14	1594									
			OBS	0300		0134	343		2752						1594									
			STD	0400		0210	345		2759		00053	11	0337	_	646									
			OBS	0400		0210	345		2759				-0-		646									
			STD	0500		0214	345		2762		00050	17	0389		665									
			OBS	0500 0600		0214	345		2762		20063	27	0437		665									
			STD OBS	0600		0176 0176	345		2765		00047	21	043	_	665									
			STD	0700		0176	345		2766		00045	77	0484		665									
			OBS	0700		0137	345		2766		00045	1.1	0-0-	_	664									
			STD	0800		0088	345		2767		00044	19	0529		659									
			OBS	0800		0088	345		2767		55574	- /	U-2:		659									
			STD	0900		0047	344		2768		00042	52	0572		657									
			OBS	0900		0047	344	80	2768					14	657									
			STD	1000		0029	344		2769		00041	13	0614	14	666									
			OBS	1000		0029	344	80	2769					14	666									

REFERENCE CTRY IO. CODE NO.	SHIP	LATITUE	)E LOP	· 1/10	MARSOEN SQUARE	STATION THE	YEAR	ORIGINATO	ION ABER	DEPTH DEPTH OF STAPES	DIR.	WAVE ERVATIONS HGT PER SE		CODES	1	12 N	ATION UMBER	
318160	WE	75020	)N 06	7060W	259 57 WAT		92 1969 IND BAR	AIR TEMP.	°C	NO. SPEC	32	1 2	1 00	1 6 1	1	' '	0019	
					COLOR	TRANS. DIR.	SPEED MET	ER ORY V	VET CODE	OBS. DEPTHS OBSERV								
					DT	_	500 97		11 7	14								
	MESSENGR TIME O	CAST NO.	CARD TYPE	DEPTH (m)	1 %	s ·4.	SIGMA-T	SPECIFIC VOLUME ANOMALY—X107	₹ Δ D DYN. M. x 10 <sup>3</sup>	SOUND	O <sub>2</sub> m1/I	PO4-P ug = a1/1	10TAL-P 1/10 - gu	NO <sub>2</sub> -N g - σt/l	NO3-N υφ - σι/1	\$1 O4-\$1 pg = ot/1	рН	s C C
	1111 17 19																	
	ı	' '	STD	0000	0065	3200	2568	0023210	0000	14481								
	192		OBS	0000	0065 0050	32000 3290	2568 2641	0016266	0020	14481 14488								
			STD	0010 0010	0050	32900	2641	0010200	0020	14488								
			STD	0020	-0130	3323	2675	0013025	0034	14411								
			OBS	0020	-0130	33230	2675		00/7	14411								
			STD	0030	-0153	3336 33360	2686 2686	0011959	0047	14404 14404								
			OBS	0030 0050	-0153 -0168	3346	2695	0011141	0070	14401								
			OBS	0050	-0168	33460	2695			14401								
			STD	0075	-0170	3354	2701	0010504	0097	14406								
			OBS	0075	-0170	33540	2701		0100	14406 14416								
			STD	0100	-0160	3365	2710 2710	0009669	0122	14416								
			OBS	0100	-0160 -0152	33650 3371	2710	0009216	0146									
			STD	0125 0125	-0152	33710	2714	0007210	0 - 10	14425								
			STD	0150	-0023	3395	2729	0007873	0167	14493								
			OBS	0150	-0023	33950	2729			14493								
			STD	0200	0123	3414	2736	0007287	0205									
			OBS	0200	0123	34140	2736		-200	14570								
			STO	0250	0174	3432	2747	0006313	0239	14603 14603								
			OBS	0250	0174	34320	2747	0005700	0269									
			STD	0300 0300	0208 0208	3444 34440	2754 2754	0005700	0209	14628								
			OBS STD	0400	0208	3450	2757	0005484	0325									
			OBS	0400	0230	34500	2757			14655								
			STD	0500	0195	3452	2761	0005076	0378									
			OBS	0500	0195	34520	2761			14657								

REFERENCE CIET IO. CDDE NO.	SHIP COOE	7511	1/10	7050W	MARSOEN SOUARE 10° 1° 259 57 WA COLOR CODE		YEAR R.1/10	ER DRY W	TON VIS.		N OBS	WAVE ERVATIONS HGT PER SE	WEA- THER CODE	CLOUD COOES TYPE AM		IZ N	ATION UMRER 0020
	MESSENGI	약 NO.	CARD TYPE	DEPTH (m)	1 6	s */	SIGMA-T	SPECIFIC VOLUME ANOMALY-1107	₹ ∆ D OYN. M * 10 <sup>3</sup>	. VELOCITY	O2 m1/1	PO4←P µg - ot/l	TOTAL-P pg - ot/l	NO2~N µg - al/l	NO3~N	Si O4-Si µg - al/l	pH C
	HR 1/10				+	-	-		A 10			1					
		1	STD	0000	0020	3220	2586	0021469	0000	14463	1			I			1
	212	,	OBS	0000	0020	32200	2586	0021409	0000	14463							
		_	STD	0010	0010	3235	2599	0020274	0021	14462							
			OBS	0010	0010	32350	2599			14462							
			STD OBS	0020 0020	-0083 -0083	3312 33120	2665 2665	0014014	0038	14432 14432							
			STD	0020	-0114	3336	2685	0012069	0051								
			OBS	0030	-0114	33360	2685			14422							
			STD	0050	-0130	3343	2691	0011472	0075								
			OBS STD	0050 0075	-0130 -0130	33430 3357	2691 2703	0010384	0102	14419 14425							
			085	0075	-0130	33570	2703	0010384	0102	14425							
			STD	0100	-0098	3365	2708	0009864	0127								
			OBS	0100	-0098	33650	2708			14445							
			STD	0125	-0008	3377	2714	0009322	0151								
			OBS STD	0125 0150	-0008 0010	33770 3382	2714 2717	0009028	0174	14493 14506							
			OBS	0150	0010	33820	2717	0009028	0114	14506							
			STO	0200	0127	3410	2733	0007617	0216	14571							
			OBS	0200	0127	34100	2733			14571							
			STD	0250	0160	3426	2743	0006659	0251								
			OBS STD	0250 0300	0160 0192	34260 3435	2743 2748	0006247	0284	14596 14620							
			OBS	0300	0192	34350	2748	0000247	0204	14620							
			STO	0400	0193	3448	2758	0005318	0342								
			OBS	0400	0193	34480	2758			14639							

																											_
REFERENCE	SNIP	LATITU		LONGITUDE	MAR			ON TI	IME	YEAR		DRIGIT				EPTH	DEPTI		WAY SERVA		W E		CLOUD			NODC	
COOR ND.	CDDE	LATIF	1/10	1/10	10"		MD D		P 7/10	TEAR	CRUI		STATE			TTDM	0.0	1 00		PER SE	CB	DE -	TYPE AM	-		NUMBER	
	-		1/10	1/10							+				+		3 14.16		$\top$	$\neg$				1	-		-
318160	) ME	7522	ON	067020W	1259	157 I			005 L	1969	IWE	2 02 AIR TE		m 1	_	390	L	0.3	l o ا	2	0	1	3   3	ı	- 1	0021	ř.I
						COLDR	TRANS.		SPEED	MET		DRY		ET CO	/ [ ۸	ND, DBS,		ECIAL VATIONS									
						CODE	IM1	DIR	FORCE	to to		BULB		ILB CO	וס	PTHS	DROFK	VARIONS	1								
						DT	S	03	505	97	7 -	022	-0	39 7	1	12			1								
	MESSENG	RICAST							1	1	_	IFIC VOL	<u>'</u>	. Σ Δ α		SDU	IND		1	24-1				NO3-N	SI D4-		s
	TIME	of ND.	CAF		T	*C	S	٠/	SIGA	7-A		DMALY-I		DYN. / X 10 <sup>3</sup>	M. I		CITY	O2 ml/		- a1/I	TOTAL		NO2-N µ0 - 01/I	νο 3 – N γο - αι/Ι			C
	HR 1/1	<del>}</del>			+		-		+		$\vdash$			× 10	-		_		+			+			-	+-	+H
	1	1	١ .		1				1		i		,	000	_ 1				- 1			- 1			1		11
		_	_	0000		010	323 323		260		00	2004	8	0000	J	144											
	0.0	פ	083	S 0000 TD 0010		010 008	324		260		00	1973	n	0020	n	144											
			083			008	324	_	260		00	1713	•	002	•		462										
				0020		102	331		266		00	1356	8	0037	7	144											
			083			102	331		266							144	424										
			S	TO 0030	-0	121	333	7	268	36	00	1197	1	0049	9	144	419										
			083	5 0030		121	333		268							144											
			_	TO 0050		114	334		269		00	1136	7	0073	3	144											
			089			114	334		269				_		_	144											
			51			126	335		270		00	1055	0	0100	0	144											
			085			126	335		270		00	0922	2	0125	c.	144											
			51			066 066	337		27		00	0722	_	012:	,	144											
			083			004	338		27		00	0884	a	0147	7	144											
			089			004	338		271		00	0004	,	014	'	144											
			51			057	339		272		0.0	0822	5	0169	9	145											
			089		_	057	339	-	272		•	0022		0-0.		145											
			51			128	341	_	27		00	0754	8	0208	8	145	572										
			085			128	341	10	273	33						145	572										
			51	D 0250	0	171	342		274		00	0681	8	0244	4	146											
			085			171	342		274							146											
			S1	-		192	343		274		00	0624	7	0277	7	146	-										
			083	0300	0	192	343	50	274	8						146	620										

ID. ND.	SNIP	LATITU	OE 1/10	LONGITUDE	MAR 5DU	SDEN IARE	1	IDN TIA GMTI	YEAR	CRUISE ND.		OR'S TIDN MBER	DEPTH TO BOTTO	DEPTH	D85	WAVE SERVATION HGT FER	CD.	R CC	DUD		51	NDDC ATIDN UMBER	
160	WE	7531	2N	065510w	259	COLOR CODE	TRANS.	DIR.	OR IM	TER 8	DRY BULB	WET COD	DEPTH	SPE	O 3	0 2	10	1   x	2			0022	
		, ,				DT	5	03	510 98	8 -0	22 -	039 7	12	<u> </u>	1	,	,						_
	MESSENGR TIME HR 1/10	CAST	CARD TYPE		ī	*	s	٠/٠.	SIGMA-T		C VOLUMI	₹ △ C DYN. A X 10 <sup>3</sup>	1- 1 1/5	סאטי יסאטי.	D <sub>2</sub> mi/I	PD4=P µg = ot/l	fOTAL- pg - of			NO3-N yg - at/l	SI D4→Si µg - al/l	рН	S
[																							П
			STI	0000	. 0	025	324	+0	2602	001	9963	0000	14	468			•		•				•
	021	l	085	0000	0	025	324	+00	2602				14	468									
			STI			020	325		2614	001	8791	0019		470									
			085	0010		020	325		2614					470									
			STI			070	330		2656	001	4825	0036		436									
			085	0020		070	330		2656		2210	0050		436									
			OBS	0030		118 118	333		2684 2684	001	2210	0050		420									
			STI			115	334		2693	00.1	1288	0073		426									
			OBS	0050		115	334		2693	001	1200	0012		426									
			STI			100	335		2703	001	0329	0100		439									
			085	0075		100	335		2703				14	439									
			STI	0100	-0	050	337	75	2714	000	9289	0125	14	469									
			085	0100	-0	050	337	750	2714				14	469									
			STI	0125	0	027	338	34	2718	000	8969	0148		510									
			085	0125		027	338		2718					510									
			STI			062	339		2727	000	8103	0169		532									
			085	0150		062	339		2727			_		532									
			ST			138	341		2734	000	7467	0208		576									
			085	0200		138	341		2734			02.0		576									
			STI			181	343		2746	000	6442	0243		606									
			OBS	0250		181	343		2746	000	5867	0273		606									
			085	0300		210 210	344		2752 2752	000	1000	0272		629									
			U03	0300	U	210	544	+20	2132				14	027									

													,				7
REFERENCE			- E MARSDEN	STATION		ORIGIN.	ATDR'S	DEPTH	OEPTH	0000	WAVE RVATIONS	WEA-	CLOUG			NODC	
CTRY 10. CODE	LATITUDE	LONGITUDE	SOUARE	(GM			TATION	ROTTOM	0.6		HGT PER S	COGE	TYPE AM	,		NUMBER	
CODE NO.	1/1	0 1/10	10. 1.	MO DAY	HR.1/10												1
318160 WE	75390N	066460W				59 WE2 02		0500		04,1	0   2	00	1313	I	l	0023	sl .
			<u> </u>	ATER		ARO- AIR TEA	VIZ		SPECIA								
			CDL	DR TRANS DI	R   OP   ''	NETER DRY	WET COC	OEPTHS	OBSERVAT	IDN\$							
			_		TORCE		-031 7	126									
			101	S 0	4 508	984 -019		14	I		T					T	$\neg$
MESSENGE		ARD DEPTH	m) T°C	s °/.	SIGMA-	SPECIFIC VOLU	A7   DIN. A	A. 1550	D D D	2 ml/l	PO4-P	TOTAL-P	NO2-N	ND3~N	SID4-S		C
HR 1/10		TYPE				Altolike	x 10 <sup>3</sup>	455	00111		μg ~ ot/1	Jg - 01/I	µg - ol/1	yg ~ al/l	yg - at/	<u>'</u>	_
						1											
'		STD 000	0052	3254	2612	001902	4 0000	14	483								
036		BS 000	0052	3254	0 2612				483								
		STD 001	0048	3257	2615	001877	3 0019		483								
	01	BS 001	0048	3257					483								
		STD 002	-0028		2635	001682	1 0037		453								
	01	BS 002							453								
		STD 003			2667	001382	7 0052		450								
		BS 003				0011/7			450								
		STD 005			2689	001167	8 0078		457 457								
		BS 005				00.007	4 0106		476								
		STD 007			2698 0 2698	001087	4 0106		476								
		BS 007: STD 010			2708	000985	8 0132		463								
		STD 0100 BS 0100				000,00	0 0132		463								
		STD 012			2713	000944	5 0156		490								
		BS 012							490								
		STO 015			2719	000886	4 0179		512								
		BS 015						14	512								
	-	STD 020			2730	000786	0 0220	14	561								
		BS 020		3405	0 2730			14	561								
		STD 025	0153	3422	2740	000690	9 0257	7 14	592								
	01	BS 025	0153	3422	0 2740			14	592								
		STD 030	0179	3433	2747	000629	4 0290	14	614								
	0	BS 030							614								
		STD 040	0180		2757	000543	6 0349		632								
		BS 040							632								
		STD 050			2761	000507	6 0402		636								
	01	BS 050	0 0150	3447	0 2761			14	636								

REFERENCE CTEY IO. CODE NO. CODE NO.	0E LON	GITUOE SOUTH	ARSDEN DUARE	-{(	ON TIM	YEAR		TATION IUMBER	OEF TO BDTT	0   "	OBSE	WAVE RVATIONS HGT PER SE	WEA- THER CODE	CLDUD CODES	ī	S	NOOC TATION UMBER	
318160 WE 7549	5N 06	6452W 25	WAT	ER	23 05 WII	RAR		AP. °C	019	O. SPE	CIAL		00	0		-	0024	
			COLOR	TRANS.	DIR.	OR (mb		BULB CO	DEP		ZATIONS							
			DT	s	09 5	01 98	4 -019	-031	0.	9								
MESSENGR CAST TIME OF NO. HR 1/10	CARD TYPE	DEPTH Imi	τ ℃	2	٠/	SIGMA-1	SPECIFIC VOLU		M	SDUND	O2 ml/l	PO 4-P pg = o1/I	TOTAL-P pg - at/1	NO2-N µg - qt/l	ND3~N µg - al/l	\$1 D4-\$i yg - al/1	рΗ	SCC
055	ST0 OBS		-0035 -0035	302		2427 2427	003657	6 000		14410 14410								
0,7,5	STD		0015	310		2491	003050	2 003		14432								
	OBS		-0015	310		2491				14432								
	STD	0020	0057	320		2570	002301	2 006		14481								
	OBS	0020	0057	320		2570	001054	1 008		14481 14486								
	STD	0030 0030	0050	324		2606 2606	001954	1 008		14486								
	STO		-0055	331		2663	001417	8 011		14450								
	OBS		-0055	331		2663				14450								
	STD		-0059	333	31	2679	001262	2 014	9	14455								
	OBS		-0059	333	310	2679				14455								
	STO		-0046	334		2691	001144	3 017		14467								
	OBS	_	-0046	334		2691				14467								
	STD		-0027	335		2699	001075	6 020	-	14481								
	OBS		-0027 -0010	335		2699 2705	001014	5 023		14481 14495								
	STD OBS		-0010	336		2705	001014	023		14495								

REFERENCE CTRY IO.	SHIP	LATITU	OE 1/10	LONGITUDE	DRIFT	M ARS	ARE		IGM	TIME TI HR,1/1		EAR	CRUISI NO.	E :	ATOR'S MOITATION		DEPT TO BOTTO	2	MAX. DEPTN OF S'MPL*	085	WAVE ERVAT	SHOE	- 500	ER .	CODES		\$	NOOC TATION UMBER	
318160	WE	7548	4 N	067240W		259	57.	09	23	098	110	969	WE2	02	5		006						0;	2	0 0			0025	
-1010							WA.	ER	工	WIND		BARO		AIR TE		VIS.	NO.	.	SPE	CIAL									
							COLOR	TRAN (m)	S. DII	R. O	R	(mba)		ORY	BULB	coo	DEPTI			ZMOITAY									
							ρŢ	s	04	4 50	3	990	) -0	139			05												
	MESSENGR TIME HR 1/10	CAST NO.	CARE		lm (	т	°C		5 %.	.   5	GMA	т		C VOLU	ME d	∆ D YN. M x 10 <sup>3</sup>	. v	ELO	CITT	O <sub>2</sub> ml/l	20.		TOTAL-		NO2-N	NO3~N	SI O4~Si		SCC
	716 1710	1			_		-	$\vdash$		_		$\neg$			-		+				-			+					+1
	1		ST	ວ່ວວວ	0	-00	020	30	00	. 2	411	ı '	003	816	ວ່ ວ	000	1	44	14		'		'	,		ı	1		٠.
	098		OBS				020		000	-	41								14										
			ST				010		75		470		003	251	3 0	035	_		40										
			OBS				010		750		470			25.	, ,				40										
			ST OBS	_			057 057		95 95(		564 564		002	354	6 U	063			80										
			ST	_			000		57		617		001	854	1 0	084			64										
			OBS				000		570		617		001	.074	1 0	V 0 4	-		64										
			ST				055		90		646		001	578	4 0	119			47										
			085				055		900		646								47										

REFER	ENCE	SHIP			h .	MARSO	EN	STATI	ON TI			ORIG	INATO	R*S	DEPTH	MAX. DEPTH		WAVE	WEA				NOGC	1
CTRY	10. NO.	COOE	LATITU		ONGITUDE	AUDZ			GMT)		rEAR	CRUISE	STAT		ROTTON	, OF		ERVATION	5001				TATION	
2004	NO.			1/10	'1/10	10*	1° A	40 D	AY H	R,1/10		NO.	NUN	ABEK		S'MPL"	OIRL	HGT PER	SEA	TYPE A A	13	- '	DAIBER	4
318	160	WE !	7545	3N 0	67440W	259	57 0		3 1	05 1	969	WEZ 0			0210				02	100			0026	
							WATE	R	w	ONI	BARC	)• <del>  </del>	TEMP.	ZIV ZIV	NO.	SPE	CIAL							
							OLOR 1	TRANS.	DIR,	SPEED	METE			ET COD	OBS. OEPTHS	OBSERV								
										FORCE		-	+	-		-								
	,		_				DT	S	04	503	996	6 000	<u> </u>	11	10	Ь,								_
	ŀ	MESSENG!		CARD	DEPTH (m)	т.	rc I	\$	٠/	SIGMA	A-T	SPECIFIC VO		₹ Δ D OYN, M		סאט	02 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	SI 04-Si	рН	5
		HR 1/10		TYPE	,	-						ANOMALT-	-X10'	2 10 <sup>3</sup>	, AEL	OCITY		μg = 01/1	μg - α1/1	µg − 01/i	μg - αI/I	J/10 - gu	Pri	č
																								$\top$
				STD	0000	00:	30 '	316	5	254	2 '	00257	17	0000	14	460		'	'		'	'		
		105	5	085	0000	00	30	316		254			_		14	460								
				STD	0010	004	46	322	0	258	5	00215	87	0024	14	477								
				OBS	0010	004	46	322		258	5				14	477								
				STD	0020	004		325		261		00189	13	0044		483								
				OBS	0020	004		325		261:						483								
				STD	0030	00		328		263		00166	24	0062		475								
				OBS	0030	00		328		263		00122	- ,	0000		475								
				STO OBS	0050 0050	-001 -001		332 332		2673 2673		00132	56	0092	-	460 460								
				STD	0075	-004	-	334		2690		00116	20	0123		465								
				085	0075	-004		334		269		00110	30	0123		465								
				STD	0100	-00		336		270		00101	56	0150		486								
				oBs	0100	-00		336		270					-	486								
				STD	0125	002		337		271		00095	02	0174	-	509								
				OBS	0125	002	27	337	70	271	2				14	509								
				STO	0150	004	49	338	6	271	8	00089	38	0198	14	524								
				OBS	0150	004	49	338	60	271	8				14	524								
				STD	0200	000		339		272		00085	95	0241		542								
				OBS	0200	000	68	339	20	272	2				14	542								

REFERENCE SHIP LATITUDE CODE NO. 1/10	LONGITUDE 50 MARSOEN SOUARE 10° 1° 067568W 259 57	STATION TIME (GMT) YEAR MO DAY NR.1/10 09 23 121 1969	ORIGINATOR'S  GRUISE STATION NO. NUMBER	POTTOM OF	WAVE THER THER CODE	CLOUD CODES	NODC STATION NUMBER
318160  WE   75360N	cop	ATER WIND BAI	RO- TER DRY WET CO BULE BULE	S. NO. SPECIAL OBSERVATIONS			
MESSENGR CAST CARE TIME OF NO. TYPE		S 00 S00 99	SPECIFIC VOLUME SACYN.	M.   WELDCITY   O2 ml/1	PO4-P TOTAL-P µg = at/1		51 O4-5i µg - ol/I pH C
ST 121 OBS ST	0000 0009	3253 2613 32530 2613 3253 2613	0018898 000	14463		1 1	
08S ST OBS	0010 0009 D 0020 -0050 0020 -0050	32530 2613 3299 2653 32990 2653	0015128 003	14464 6 14445 14445			
ST 08S ST 08S	0030 -0110 0 0050 -0080	3328 2678 33280 2678 3344 2690 33440 2690	0012694 005 0011559 007	14423			
ST OBS ST	0075 -0050 D 0100 0000	3360 2702 33600 2702 3374 2711 33740 2711	0010443 010 0009595 012	14463			
0BS ST 08S ST	D 0125 0044 0125 0044	3384 2717 33840 2717 3397 2726	0009063 015 0008245 017	0 14518 14518 2 14537			
OBS ST OBS ST	D 0200 0138 0200 0138	33970 2726 3414 2735 34140 2735 3426 2743	0007392 021	14576			
OBS	- '	34260 2743	0000112 024	14599			

REFERENCE SHIP	LATITUE	E LON	ACILIDOE 30 DILIFT	MARSOEN SOUARE	STATION TIN	YEAR	ORIGINATO	ION	DEPTH DEPTH TO OF BOTTOM S'MPL"	OBSERV	AVE ATIONS	WEA- THER COOE	CLOUD CODES	ī	S	NODC TATION IUMBER	
318160 WE	75270	N 06	8120W	259 58	09 23 1	35 1969	WE2 028		0310			02	2 7			0028	1
3101000 WE	1 15210	,,,,	0120#1	WAT		IND BAR	AID TEASP	2	110	CIAL	' '	, ,,		•	'		
				COLOR	TRANS, DIR.	OR MET	ER ORY V	VIS.	OBS. OBSERV								
						FORCE	-										
	1 1		1	DT	S 00	500 99	5 <u>-003</u> -0	19	12							-	$\overline{}$
MESSEN TIME HR 1/	of NO.	TYPE	OEPTN (m)	1 %	5 %.	SIGMA-T	SPECIFIC VOLUME	₹ △ D OYN. M. x 10 <sup>3</sup>	VEFOCITA		PO4-P 19 - a1/1	101A L-P pg - m1/l	NO2-N ug - al/l	NO3-N NO3-N	\$1 O4-\$i µg - o1/1		S C
																	$\Box$
· ·		STD	0000	0000	3268	2626	0017712	0000	14461								
13	35	085	0000	0000	32680	2626			14461								
		STD	0010	0010	3275	2631	0017218	0017	14468								
		OBS STD	0010 0020	0010 -0056	32750 3318	2631 2668	0013652	0033	14468 14445								
		OBS	0020	-0056	33180	2668	0013032	0033	14445								
		STD	0030	-0090	3336	2684	0012146	0046	14433								
		088	0030	-0090	33360	2684			14433								
		STD	0050	-0090	3353	2698	0010835	0069	14439								
		OBS	0050	-0090	33530	2698	00.00/0	0005	14439								
		STD	0075 0075	-0037 -0037	3366 33660	2706 2706	0010040	0095	14470 14470								
		STD	0100	0025	3373	2709	0009799	0120	14503								
		OBS	0100	0025	33730	2709			14503								
		STD	0125	0063	3393	2723	0008488	0143	14527								
		088	0125	0063	33930	2723			14527								
		STD	0150	8800	3400	2727	0008110	0163	14544								
		OBS STD	0150 0200	0088 0132	34000 3414	2727 2735	0007349	0202	14544 14574								
		OBS	0200	0132	34140	2735	Q001549	0-02	14574								
		STD	0250	0164	3427	2744	0006614	0237	14598								
		085	0250	0164	34270	2744			14598								
		STD	0300	0184	3436	2749	0006108	0269	14616								
		OBS	0300	0184	34360	2749			14616								

REFERENCE	SHII		JDE L	OCT 3DUTIONO.	MARSDEN SQUARE	STATION TI	ME YEAR	ORIGINA CRUISE ST	TOR'S	DEPTH TO	MAX. DEPTH		WAVE RVATIONS		CODE		51	NODC	
COOE NO	-	-	1/10	1/10 =	10" 1"	MO DAY H		NO. NI	IMBER	BOTTOM	S'MPL'S	DIR.	HGT PER S		TYPE A N			UMBER	-
31816	OI WE	7517	ON IO	68240wl	259   58   WA		52 196	9 WE2 029	2. %	0440 NO.		<sup> </sup>	1 1	02	2 7	1	- 1	0029	1
					COLOR	TRANS. DIR.	SPEED ME	TER DRY	WET CODE		OBSERVA	TIONS							
					DT	S 09			039	13									
	MESSE	NGR CAST	CARD	DEPTH (m)	T °C	s */	SIGMA-T	SPECIFIC VOLUM	E Z A D	sou		02 ml/l	PO4-P	1DTAL-P	NO2-N	и03-и	SI O4-Si	рН	S
	HR 1		TYPE					ANOMALY-X107	X 10 <sup>3</sup>	AFFO	CITY		μg + qt/l	νg - ο1/1	yg - al/l	yg - a1/l	yg - 01/1	,	Č
	1	1	STD	0000	-0028	3270	2629	0017442	0000	144	.48								-1
	1	52	085	0000	-0028	32700	2629			144	48								
			STD OBS	0010 0010	-0035 -0035	3274 32740	2632 2632	0017104	0017	144									
			STD	0020	-0090	3320	2671	0013377	0033	144	30								
			OBS STD	0020 0030	-0090 -0109	33200 3336	2671 2685	0012084	0045	144									
			OBS	0030	-0109	33360	2685	0011/00	0040	144									
			STD 085	0050 0050	-0118 -0118	3344 33440	2692 2692	0011432	0069	144									
			STD	0075	-0130	3355	2701	0010537	0096										
			OBS STD	0075 0100	-0130 -0091	33550 3366	2701 2709	0009813	0122	144									
			08S STD	0100 0125	-0091 -0026	33660 3378	2709 2716	0009160	0145	144 144									
			0BS	0125	-0026	33780	2716	0009160	0145	144									
			STD OBS	0150 0150	0022 0022	3391 33910	2724 2724	0008408	0167	145 145									
			STD	0200	8800	3413	2738	0007129	0206										
			OBS STD	0200 0250	0088 0140	34130 3421	2738 2741	0006889	0241	145 145									
			OBS	0250	0140	34210	2741			145	87								
			STD OBS	0300 0300	0187 0187	3437 34370	2750 2750	0006056	0274	146 146									
			STD	0400	0192	3445	2756	0005535	0332	146	38								
			085	0400	0192	34450	2756			146	38								
REFERENCE ID. NO. NO. 31816	CODE	7507	1/10	1/10 E E E			YEAR	NO. NU  WE2 030  AIR TEMP	TION MOER	0620 No.	MAX, DEPTH OF S'MPL'S SPECIA OBSERVA	OBSEI	WAVE RVATIONS FGT PER SE	WEA- THER CODE	CODES		ST	ATION UMBER	
					DT	S 17	503 99		39 7	15									
	IIM	GR CAST	CARD	DEPTH (m)	T *C	s °/	SIGMA-T	SPECIFIC VOLUME	₹ Δ D OYN. M.	SOUR		) 2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	\$1 O4~\$i	ρH	S
	HR 1/	10							x 10 <sup>3</sup>	71100			μg - α1/1	P9 - 01/1	1\10 - gu	µg - 01/1	yg - at/l		c
	'		STD	0000	-0030	3254	2616	0018658	0000	144		'	'		ı		'		-
	10	69	OBS STD	0000 0010	-0030 -0035	32540 3254	2616 2616	0018634	0019	144									
			085	0010	-0035	32540	2616	001/5/0		144	44								
			STD OBS	0020 0020	-0085 -0085	3305 33050	2659 2659	0014543	0035	144 144									
			STD OBS	0030 0030	-0119 -0119	3335 33350	2684	0012130	0049	144 144									
			STD	0050	-0119	3344	2684 2692	0011429	0072	144	24								
			OBS STD	0050 0075	-0119 -0123	33440 3350	2692 2697	0010942	0100	144 144									
			OBS	0075	-0123	33500	2697			144	27								
			STD OBS	0100 0100	-0148 -0148	3366 33660	2710 2710	0009626	0126	144									
			STD	0125	0006	3375	2712	0009544	0150	144	99								
			OBS STD	0125 0150	0006 0027	33750 3380	2712 2715	0009271	0173	144 145									
			OBS	0150	0027	33800	2715			145	13								
			STD OBS	0200 0200	0108 0108	3410 34100	2734 2734	0007488	0215	145 145									
			STD	0250	0180	3431	2746	0006434	0250	146	06								
			OBS STD	0250 0300	0180 0204	34310 3440	2746 2751	0005968	0281	146 146									
			OBS STO	0300	0204	34400	2751			146	26								
						3452	2758	0005396	0338	146	28								
			oBs	0400 0400	0237 0237	34520	2758			146	58								
			OBS STD	0400 0500	0237 0209	34520 3455	2758 2763	0004973	0390	146 146	63								
			OBS STD OBS STO	0400 0500 0500 0600	0237 0209 0209 0123	34520	2758	0004973	0390	146	63 63								
			OBS STD OBS	0400 0500 0500	0237 0209 0209	34520 3455 34550	2758 2763 2763		0390	146 146 146	63 63 42								

REFERENCE			MELL BOUTION	MARSOEH	STATION TI			ORIGINA	ATOR'S	T	DEPTH	MAX		WAVE	WEA-	CLOUD			ноос
CTRY IO. CODE	LATITL			SOUARE	(GMT)		AR		TATION	8	TO OTTOM	OF		ERVATIONS	THER	CODES	ļ		TATION UMBER
CODE NO.	-	1/10	1/10 =	10° 1°	MO OAY HI	ξ1/10	$\overline{}$	NO. 1	UMEEK	+		Z,WbF.2	Oilt	HGT PER SE	^	TYPE AM		_	
318160 WE	7458	ON 06	8525W				69	WE2 03		_lo	930				02	3 3	}	- 1	0031
				WAT	-		BARO			/IS.	NO.	SPEC							
				COLOR	TRANS. DIR.	OR	(mba)		BULR C		SHTAS	DESERVA	ENOIL						
				D.T.	S 08		996	-009	-028 7	, †	18								
		1		DT	3 1081	309 [	770	- L003 L		_	10			1					
MESSEN		CARO	OEPTH (m)	T °C	s */	SIGMA-	-т	SPECIFIC VOLUM		Μ.	VELOC		0 2 ml/l	PO <sub>4</sub> -P	TOTAL-P	NO2-N	NO3-N	SI O4-Si	pH
HR 1/							_		X 1	03	1			μg = αI/  .	ا/la • وبر	μg - αl/l	1\to - gu	μg - αt/1	
						1													
		STD	0000	0002	3215	2583		002177	2 000	0	144								
16	38	OBS	0000	0002	32150	2583					144								
		STD	0010	-0030	3268	2627		001758	3 002	0	144								
		OBS	0010	-0030	32680	2627		001205	7 001		144								
		STD	0020	-0127	3324 33240	2676 2676		001295	7 003	כי	144								
		OBS STD	0020	-0127 -0149	3344	2693		001135	5 004	. 7	144								
		OBS	0030	-0149	33440	2693		001100.	, ,,,		144								
		STD	0050	-0142	3345	2693		001128	5 007	70	144								
		OBS	0050	-0142	33450	2693					144								
		STD	0075	-0161	3355	2702	:	0010450	009	7	144	10							
		OBS	0075	-0161	33550	2702					144								
		STD	0100	-0137	3363	2708		0009B88	3 012	22	144								
		OBS	0100	-0137	33630	2708					144								
		STD	0125	-0021	3377	2715		0009260	014	16	144								
		OBS STD	0125 0150	-0021 -0018	33770 3381	2715 2718		000896	3 016	. 0	144								
		085	0150	-0018	33810	2718		000070.	010	,	144								
		STD	0200	0027	3398	2729		0007898	B 021	1	145								
		OBS	0200	0027	33980	2729					145								
		STD	0250	0072	3414	2739		0006955	024	в	145								
		OBS	0250	0072	34140	2739	,				145	55							
		STD	0300	0100	3423	2745		0006469	5 028	32	145								
		OBS	0300	0100	34230	2745				_	145								
		STD	0400	0219	3448	2756		0005539	9 034	+2	146								
		OBS STD	0400 0500	0219 0226	34480 3452	2756 2759		000534	9 039	16	146 146								
		085	0500	0226	34520	2759		000234	, 0,,	, 0	146								
		STD	0600	0207	3452	2760		0005226	5 044	. 9	146								
		OBS	0600	0207	34520	2760			• • •	. ,	146								
		STD	0700	0170	3451	2762		000501	1 050	00	146								
		OBS	0700	0170	34510	2762		_			146								
		STD	0800	0132	3451	2765	1	000471	1 054	9	146	79							
		OBS	0800	0132	34510	2765					146								
		STD	0900	0100	3451	2767		0004460	059	75	146								
		OBS	0900	0100	34510	2767					146	81							

REFE	RENCE	SHIP			- =	MARSO	DEN		ION TI			DRIG	INATO	R*S	DEP	III I D	MAX. EPTH		WAVE	,	WEA-	CLOUD		-T	NODC	
CODE	ID.	CODE	LATITU	1	ONGITUDE LINE	SQUA			GMT)		YEAR	CRUISE	STAT		BOTT	این	OF L		ERVA TION		THER	COOES		2	UMBER	
	NO.			1/10	1/10	10"	1" /	MO D	AY H	R,1/10		NO.	NUM	BEK	1000	51,	MPL'S	DIR	HGT PER	SEA		MA 39YT	1		OMOLK	
31	8160	WE	7448	ON O	69060W	259					969		32		102	20					03	3 4			0032	
						H	WATI		W	SPEED	BARC	)- <del>                                    </del>	TEMP.	VIS			SPECI	AL								
							CODE	TRANS. (m)	DIR.	OR	METE			ET CO	DEPT		SERVA	ENOIL								
							$\rightarrow$		0.0		+			_	1	.  -										
							DT	S	00	500	00.	7  -009	-0		19	<u>′                                      </u>			_		-			1		77
		MESSENG:	CAST	CARD	DEPTH (m)	т	°c '	s	٠/	SIGM	A-T	SPECIFIC VO	LUME	₹ Δ E	Q.   ,	SOUND		) 2 m]/[	PO <sub>4</sub> -P		NL-P	NO2-N	NO3-N	SI O4-Si	pΝ	S C
		HR 1/10	1	1176						ļ		***************************************		x 10 <sup>3</sup>	<u>'   '</u>	, ELOCII			yg - a1/	ı pg -	01/1	/la - קע	μg - at/}	µg - al/l		c
			1																		- 1					1
				STO	0000	00	23	321	.7	258	4	00217	11	0000	) 1	446	4									
		20:	3	OBS	0000		23	321		258						446	4									
				STD			23	327		262		00176	60	0020		447										
				OBS	0010		23	327	-	262		00.55		00.0		447										
				STD	0020	-00	-	331		267		00135	47	003		443										
				OBS STD	0020 0030	-00 -01		331		267 268		00121	0.2	0048		.443 .441										
				OB5	0030	-01		333		268		00121	00	0048		441										
				STD		-01		334		269		00111	73	0072		440										
				OBS	0050	-01		334		269		00111		0012		440										
				STD	0075	-01		336	-	270		00101	19	0098	_	442										
				085	0075	-01		336		270						442										
				STD	0100	-01	28	336	4	270	8	00098	40	0123	3 1	443	1									
				OBS	0100	-01		336		270					1	443	1									
				STD	0125	-01		337		271		00087	61	0146		443										
				OBS	0125	-01		337		271						443										
				STD	0150	00		339		272		00084	96	0168		452										
				OBS	0150	00		339	_	272		00075	~~	0300		452										
				STD OBS	0200 0200	00		340		273 273		00075	00	0208		453										
				STD	0250	00		342		274		00061	86	0242		456										
				OBS	0250	00		342		274		00001	-	V = 42		456										
				STD	0300	01		344		275		00055	42	0271		460										
				OBS	0300	01		344	00	275						460										
				STD	0400	02		345		276		00051	31	0329		465										
				OBS	0400	02		345		276						465										
				STD	0500	02		345		276		00052	42	0377		467										
				OBS	0500	02		345		276				060		467										
				STO	0600	01		345 345		276		00047	80	0427		466										
				OBS STO	0600 0700	01 01		345		276 276		00047	03	0474		.466 .466										
				085	0700	01		345		276		00047	00	0+14		466										
				STD	0800	01		345		276		00046	0.8	0521		466										
				OBS	0800	01		345		277							-									
				STD	0900	00		344		276		00045	09	0566	5 1	467	6									
				OBS	0900	00	88	344	90	276	6				1	467	6									
				STD	1000	00		344		276		00043	71	0611		468										
				OBS	1000	00	70	344	90	276	8				1	468	4									

REFERENCE	SNIP			-	≝ MAR	SDEN	STATION	TIME	YEAR		GINATO		DEPTH TO	DEPTH		WAVE	WEA	CLOUD			NDDC	
CODE NO.	CODE	LATITU	1/10	ONGITUDE 5	10°		MD DAY		ICAK	ND.	STAT		SDITON	S'MPL		HGT PER S	CODE				NUMBER	
-					1	1								-	-						0000	
318160	DI ME I	7459	ON 1 O	70425W	1260	40 WA		WIND		A ID	133 TEMP.		0820 NO.	<u>'</u>			l 70	1 6 8	1	- 1	00331	
						COLOR	TRANS. DIR.	SPEED	BAR MET	ER DRY	W	VIS CODE	DBS.		CIAL /ATIONS							
						CDDE	tm1	FORC	E (mb	s) BULI	R BI	ULB	DEPTHS									
						DT	5 27	512	00	4 -006	5 -0	06 7	17									
	MESSENG		CARD	DEPTN (m)	Τ,	to	s °/	eic.	MA-T	SPECIFIC V		₹ ∆ D DYN, M	SD	UND	D2 ml/(	PD4-P	101AL-P	NO2-N	ND3-N	SI Q4~	-si	1
	HR 1/10		TYPE	DEFIN UNI	'	-	' '	310	m A – I	ANOMALI	-x107	x 103	. VEL	DCITY	D 2 111171	µg - 01/1	μg - o1/l	μg - σ1/l	μg - α!/l	µg - a	MI PH	C
																						T
	1	' '	STO	0000	-0	008	3250	26	12	00190	054	0000	14	455		'		•	•	,	•	,
	00	2	085	0000	_	800	32500		12					455								
		_	STD	0010	-0	090	3300	26	55	00149	915	0017	14	425								
			DBS	0010		090	33000		55					425								
			STD	0020		143	3337		87	00119	715	0030		407								
			OBS	0020		143	33370		87	00110		0042		407								
			STD	0030		152	3348 33480		96	00110	741	0042		406 406								
			08S STD	0030 0050		152 153	3360		06	00101	104	0063		411								
			085	0050		153	33600			0010		0005		411								
			STD	0075		140	3366		10	00096	665	0088		422								
			OBS	0075	-0	140	33660	27	10				14	422								
			STD	0100	-0	110	3376		17	00089	981	0111	_	441								
			OBS	0100	-	110	33760		17					441								
			STD	0125		038	3387	27		00084	+19	0133		480								
			OBS	0125 0150		038	33870 3393	27 27		0000	202	0154		480 515								
			STD OBS	0150		027 027	33930			00082	203	0194		515								
			STO	0200		075	3414	27		00069	770	0192		548								
			OBS	0200		075	34140			0000		V - / L		548								
			STD	0250		115	3428	27		00061	182	0225	_	576								
			OBS	0250	0	115	34280	27	48					576								
			STD	0300		149	3437		53	00057	761	0255		601								
			OBS	0300	-	149	34370			00053		0300		601								
			STD	0400 0400		168	3447 34470		59	00051	188	0309		627 627								
			OBS	0500		168 156	34470	27		00049	74	0360		639								
			OBS	0500		156	34490		62	0004	, , ,	0300		639								
			STO	0600		133	3451		65	00046	667	0408		646								
			OBS	0600		133	34510		65					646								
			STD	0700	0	090	3451	27	68	00043	344	0453	14	643								
			085	0700		090	34510							643								
			STD	0800		034	3450	27		00040	000	0495		635								
			OBS	0800	0	034	34500	27	71				14	635								

REFERENCE																					
CTRY IO.	COOE	LATITU		NGITUOE	SOUA	RE	STATION TI		YEAR	CRUISE	NATOR'S STATION	$\dashv$	DEPTH TO	MAX. DEPTH OF	085	WAVE ERVATIONS	WEA- THER	CODES		5 T	DOC
1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	7507	1/10	1/10			MO DAY H			NO.	NUMBER	_	BOTTON	S'MPL"	DIR.	HGT PER SE		TYPE AM	-	NI	JARBER
1 318160	JI WE I	7507	יטי אט	70280wl	1260	50 IC		17 )	1969 BARG	A ID Y	34 EMP. ℃		0620 NO.			1 1 1	70	X   9	1	(	0034
						200E	TRANS OIR	SPEED OR FORCE	METE		WET	COOE	OBS. DEPTHS	OBSERV	ATIONS						
						τ	s 00	500	01	4 -006	-006	7	15								
	MESSENGI TIME	CAST	CARD TYPE	OEPTH (m)	т,	С	s *4.	SIGN	AA-T	SPECIFIC VOL	UME E	γ <u>Α</u> . Ω.		סאנ	O2 ml/l	PO <sub>4</sub> -P	TOTA L-P	NO2-N	NO3-N	\$1 O <sub>4</sub> =5i	T
	HR 1/10	1	ITPE		-					ANOMALY-	10,	x 10 <sup>3</sup>	VEL	DCITY	02111121	μg - αt/l	νg - α1/1	µg - 01/1	µg - 01/1	μg - αI/I	рН
	1	1	l STD	0000	-00	10	3255 3255	261	16	001866		000	1.6	454			1	- 1	l	1	
	017	7	OBS	0000	-00	ι 0	32550	261	16			000		454							
			STD OBS	0010 0010	-00		3264 32640	262 262		001794	6 0	018		454 454							
			STD	0020	-012	22	3323	267	75	001304	8 0	034	14	415							
			OBS STD	0020 0030	-012 -019		33230 3349	267		001096	9 00	046		415 407							
			OBS	0030	-019		33490	269	7	_			14	407							
			STD OBS	0050 0050	-019 -019		3357 33570	270		001031	.8 0	067		407 407							
			STD OBS	0075 0075	-016		3366	271	11	000960	4 0	92	14	411							
			STD	0100	-016 -015		33660 3372	271 271		000915	5 0	115	14								
			OBS	0100	-015		33720	271		000045			14	421							
			STD OBS	0125 0125	-004 -004		3386 33860	272		000845	0.	137	144	476 476							
			STD OBS	0150 0150	000	7	3396 33960	272	8	000794	7 0	158	14	507							
			STD	0200	008		3417	272 274		000679	4 0	195	14!								
			OBS STD	0200 0250	00 8 01 2		34170 3432	274 275		000597	1 01	227	145								
			OBS	0250	012		34320	275	0			. 2 1	145								
			STD	0300 0300	015		3442 34420	275 275		000542	9 0	255	146								
			STD	0400	020	6	3450	275	-	000527	7 03	09	146								
			OBS STD	0400 0500	020 019		34500 3452	275 276		000505	0 03	60	146								
			OBS	0500	019	3	34520	276	1				146								
			STD	0600	012	8	3452	276	4	000455	1 0/	80	1 4 4	44							
			OBS	0600	012	8	34520		-	000433	1 04	00									
			OBS	0600	012	8	34520	276	-	000433	1 04	00	146								
REFERENCE			OBS	0600	MARSOE	N T		276	-				146			NA WE	T T	0.000	·		
REFERENCE CTAY IO.	SHIP COOE	LATTUC	DE LON	GITUDE SOUTH	MARS DE	N .	STATION TIA	276	6	ORIGIN	ATOR'S		1 4 6	MAX. DEPTH OF	OBSE	VAVE RVATIONS	WEA- THER	CLOUB			OOC TION
CTRY IO.	COOE	•	DE LON	GITUOE NOCE	MARSOEI SOUARE	N	STATION TIN	276	YEAR	ORIGIN CRUISE NO.	ATOR'S STATION NUMBER	R	1 4 6	MAX. DEPTH	OBSE	VAVE RVATIONS	CODE	TYPE AMT	-	NU	W BER
CTRY IO.	COOE		DE LON	GITUDE SOUTH	MARSOEI SOUARE	O O	STATION TIN	276	969 BABO-	ORIGIN CRUISE NO. WE2 03	ATOR'S STATION NUMBER 5	R.	146 0EPTH 10 0TTOM 570	MAX. OEPTH OF S'MPL'S	OBSEI OIR. H	RVATIONS	THER	COOES		NU	
CTRY IO.	COOE	•	DE LON	GITUOE NOCE	MARSOEI SOUARE 10° 1	O O WATER	STATION TIN	276	969	ORIGIN CRUISE NO. WE2 03	ATOR'S STATION NUMBER	PI O	OEPTH TO OTTOM	MAX. DEPTH OF	OBSEI	RVATIONS	CODE	TYPE AMT		NU	W BER
CTRY IO.	WE	75160	DE LON	GITUOE NOCE	MARSOEI SOUARE 10° 1	O O WATER	STATION TIME (GMT) O DAY HR 9 24 0 R WI RANS OIR.	276	YEAR 969 BARO-	ORIGIN CRUISE NO. WE 2 0 3 AR 1E DRY	ATOR'S STATION NUMBER  5 MP. 'C WET BULB  -006	VIS.	0EPTH TO OTTOM 570 NO. OBS.	MAX. OEPTH OF S'MPL'S	OBSEI	RVATIONS	CODE	TYPE AMT		NU	W BER
CTRY IO.	WE MESSENGE TIME O	75160	DE LON	GITUOE NOCE	MARSOEI SOUARE 10° 1 260 5	O O WATER	STATION TIME (GMT) O DAY HR 9 24 0 R WI RANS OIR.	276  I/10  33 1  NO  SPEED OR FORCE	969 BABO-METER [mbs) 005	ORIGINO. WE 2 0 3 AR TE DRY BULR	ATOR'S STATION NUMBER  5 MP. 'C WET EULB -006 ME   TOR'S TOR	VIS.	0EPTH TO OTTOM	MAX.  GEPTH  OF  S'MPL'S  SPEC  OBSERVA	OBSEI	PO4-P	THER CODE	TYPE AMT X 9		0	W BER
CTRY IO.	WE	75160	DE LON	1/10 E E E E E E E E E E E E E E E E E E E	MARSOEI SOUARE 10° CO	O O WATER	STATION TINIGATION OF THE STATE	276 1/10 33 1 NO SPEED OR FORCE	969 BABO-METER [mbs) 005	ORIGIN CRUISE NO. WE 2 03 AIR 1E DRY BULR -006	ATOR'S STATION NUMBER  5 MP. 'C WET EULB -006 ME   TOR'S TOR	VIS.	0EPTH TO OTTOM	MAX.  GEPTH  OF  S'MPL'S  SPEC  OBSERVA	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	75160	DE LON	1/10 E E E E E E E E E E E E E E E E E E E	MARSOEI SOUARE 10° CO	O O WATER	STATION TINIGATION OF THE STATE	276 1/10 33 1 NO SPEED OR FORCE	969 BARO-METER [mbs) OO5	ORIGIN CRUISE NO. WE 2 03 AIR 1E DRY BULR -006	ATOR'S STATION NUMBER  5 MP. TO WET BULB -006 ME SQYI X	VIS.	0EPTH TO OTTOM	MAX. OEPTH OF S'MPL'S SPEC OBSERVA	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	75160	CARO TYPE  STD OBS	OEPTH (m)	MARSOEI SOUARE 10° 260 5 CCC CCC CCC CCC CCC CCC CCC CCC CCC	O O O O O O O O O O O O O O O O O O O	STATION TILL (GMT)  O QAY   HR  9 24 0 0R  R   WI  BANS   OIR    5 %.	276  1/10  33 1  NO  SPEED ON FORCE 510  SIGMA 260 260	969 BABO-METER [mbs] 005 A-T	ORIGINO CRUISE NO. WE 2 03 AR 1E DRY SULE -006 PECIFIC VOLUMANDMALT—XI	ATOR'S STATION NUMBER  5 MP. 'C WET EULB -006 ME SY O' X	R(VIS. CCOOE C	146  OEPTH TO OTTOM  570  NO. OBS. DEPTHS  14  1444  1444	MAX. OFFTH OF S'MPL'S  SPEC OBSERVA  NO CITY  53 53	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	75160	CARO	OCEPTH (m)	MARSOEI SOUARE 10° 1260 5 CO	O O O O O O O O O O O O O O O O O O O	STATION TIME IGNITION TO COMPANY	276  1/10  1/10  33 1  NO  SPEED OR FORCE  510	969 BARDOMETER [mbs] 005 A-T	ORIGIN CRUISE NO.  WE 2 Q3  AR TE  DRY BULR  -006 PECIFIC VOLUMANOMALT—XI	ATOR'S STATION NUMBER  5 MP. 'C WET EULB -006 ME SY O' X	VIS. COOE C	146  OEPTH TO OTTOM  570 NO. OBS. DEPTHS  14	MAX. OFFTH OF S'MPL'S  SPEC OBSERVA  NO CITY  53 53 54	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	75160 CAST NO.	CARO TYPE  STD OBS STD OBS STD	OEPTH (m)  OOOO OOOO OO10 OO20	MARSOEIS SOUARE 10° 10° 10° 10° 10° 10° 10° 10° 10° 10°	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5TATION TIME (GMT)  O DAY HE 9 24 0 0	276  1/10  33 1  1/10  33 1  10  30  5160  5160  5160  260  261  261  263	969 BABO-METER [mbs] 005 A-T 88 84 46	ORIGINO CRUISE NO. WE 2 03 AR 1E DRY SULE -006 PECIFIC VOLUMANDMALT—XI	ATOR'S STATION NUMBER  5 MP. 'C WET BULB  -006 ME & QYI 7 R 8 00	R(VIS. CCOOE C	146 OCEPTH 10 OCTION 570 NO. OBS. DEPTHS 14 SOU VELO 1444 144 144	MAX. GEPTH OF S'MPL'S  SPEC OBSERVA  NO CITY  53 54 54 55	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	75160	CARO TYPE  STD OBS STD OBS STD OBS STD	OEFTH (m)  OOOO OOOO OOOO OOOO OOOO OOOO OOOO	-001 -001 -002 -002	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	STATION TIME (GMT)  O QAY   PR  9 24 0 0  EANS OIR    5 '4.  3245 3253 3253 3253 3280 3280 33280 33280	276  11/10  33 1  NO  SIGMA  2600 2610 2610 2630 2638	969  BABOO MITER [mbs]  005  A-T  888 446668	ORIGINO CRUISE NO. WE 2 03 ARR TE DRY SULR -006 SECIFIC VOLUMANOMALT—ST	ATOR'S STATION NUMBER  5 MP. 'C WET BULB OOG  ME SON O' X  8 000 9 000 5 000	00 00 00 00 00 00 00 00 00 00 00 00 00	146  OEPTH TOTOM TOTOM  570  NO. OBS. SOU VELO  144 144 144 144 144	SPEC OBSERVA	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	75160	CARD TYPE  STD OBS STD OBS STD OBS STD OBS STD OBS	OEPTH (m1	-001 -001 -002 -002 -014	N N N N N N N N N N N N N N N N N N N	5TATION TIME (GMT)  O QAY HR 9 24 0 0  TABLE S - 4.  3245 3245 3245 3245 32530 3280 3280 3280 3280 33388	2766 1100 SIGMA 2600 2611 2636 2636 2636 2636 2636 2688	969  BARO- METER Imba)  005  888 844 466 688 88	ORIGIN  ERUISE NO.  WE 2 0 3  AR 1E  DRY BULR  POR 16  AND MAIT-SI  OO 1942  OO 1879  OO 1668  OO 1182	ATOR'S STATION NUMBER  5 MP. 'C' BULB -006 ME SY O'Y  8 00 9 00 1 00	VIS. COOR COOR COOR COOR COOR COOR COOR COO	146  OEPTH TO TO TO MAN TO TO TO TO MAN TO TO TO MAN TO	MAX. OBETH OF SYMPL'S SPECTOR SERVA	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	75160	CARD TYPE  STD OBS	OCEPTH (m1)	-001 -001 -001 -002 -014 -015	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5TATION TIME (GMT)  O QAY HR  9 24 Q  R WITH  S '4.  3245 32450 3253 32530 3280 32800 3338 33380 33355	276  1/10  333 1  NO  SIGMA  2600 2611 2630 2681 2670 2700	969  BABO-MITER  (mba)  005  A-T  8884 4666888222	ORIGIN CRUISE NO. WE 27 Q3 AR TE PRY SULF O06 PRECIFIC VOLUME ANOMALY—X1 001942 001668 001182 001047	ATOR'S   STATION   NUMBER	VIS. COOF COOF COOF COOF COOF COOF COOF COO	146  OCEPTH 100 OCHOM NO. OBS. DEEPTHS  14  SOU VELO  144 144 144 144 144 144 144 144 144	MAX. OFFIT OF THE PROPERTY OF	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	75160	CARO TYPE  STD OBS STD	OEPTH (m1)  OOOO OOOO OO10 OO20 OO20 OO30 OO50	-001 -001 -001 -001 -002 -002 -014 -015 -012	N N N N N N N N N N N N N N N N N N N	5TATION TITLE (GMT)  O QAY HR 9 24 0 R WITH CORR 5 34 : 5 1.4.  3245 3245 3245 3253 3253 3253 32580 3280 33388 33388 33388	276  1/10  33 1 1  NO  500 500 500 500 500 500 500 500 500 50	969 BARDON METER (mbs) 0055 A-T 1 1 8 8 8 8 4 4 4 4 6 6 6 8 8 8 8 2 2 2 8 8	ORIGIN  ERUISE NO.  WE 2 0 3  AR 1E  DRY BULR  POR 16  AND MAIT-SI  OO 1942  OO 1879  OO 1668  OO 1182	ATOR'S   STATION   NUMBER	VIS. COOF COOF COOF COOF COOF COOF COOF COO	146  OCEPTH TO OTTOM  570  NO. OBS. OBS. OBS. 14  144 144 144 144 144 144 144 144 14	MAX. OEPITH OF SYMPL'S SPECE STATE OF S	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	75160	CARD TYPE  STD OBS STD	OCEPTH (m)	-001 -001 -002 -014 -015 -012 -012 -019	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5TATION THE IGNATION THE IGNATI	276  1/10  333 1  NO  510  1/10  260  260  263  263  263  270  270  270  2714	969 BARDO METER (mbs) 005 A-T 88 84 4 66 68 88 22 28 88	ORIGIN CRUISE NO. WE 27 Q3 AR TE PRY SULF O06 PRECIFIC VOLUME ANOMALY—X1 001942 001668 001182 001047	NATOR'S   STATION   NUMBER   NUMB	00 VIS COOR COOR COOR COOR COOR COOR COOR COO	146  OEPTH TO OTTOM  570 NO. OBS. DEPTHS  14  144 144 144 144 144 144 144 144 1	MAX. GEPTH OF SYMPL'S SPEC OBSERVA	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	75160	CARO IVIE  STD OBS	OEPTH bm1  OOOO OOOO OO10 OO20 OO20 OO30 OO50 OO50 OO75	-001 -001 -001 -002 -002 -014 -015 -015	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	51ATION TIME (GMT)  O QAY HR 9 24 0  RANN   OIR   5 '/-  3245 3245 3245 3253 3253 3253 3253 325	276  IL 10  SIGMA  260 261 261 263 263 263 263 270 270 270 270 270 271 271	969  METER (mbs)  005  A-T  888  4466 688 822	ORIGIN CRUISE NO. WE 27 Q3 AR TE PRY SULR OR 18 PROFINE VOLUMENT NO. OR 19	NATOR'S   STATION   NUMBER   STATION   NUMBER   STATION   NUMBER   STATION   NUMBER   STATION   NUMBER   STATION   NUMBER   NUM	00 VIS. CCOOR COOR COOR COOR COOR COOR COOR CO	146  OEPTH TO OTTOM  570  NO. OES, SEFFINS  14  SOULVELO  144  144  144  144  144  144  144  1	MAX. OEPTH OF OF OF OF OSSERVA	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	7516( 7516)	CARD TYPE  STD OBS	OEPTH (m1)  OOOO OOOO OOOO OOOO OOOOO OOOOO OOOOO OOOO	-001 -001 -001 -002 -002 -001 -001 -001	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	STATION THE IGNATION THE IGNATI	2766  1/10	969 BARO-0000 MITERIOR INDES	ORIGIN CRUISE NO. 1 PRIVILE NO	NATOR'S   STATION   NUMBER   STATION   NUMBER   STATION   Number	00 vis. Cool cool cool cool cool cool cool cool	146  OEPTH TO OTTOM T	MAX. OBSTH OF SYMPLS STREET SY	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	7516(	CARD TYPE  STD OBS STD	OEPTH (m)  OCEPTH (m)  OCEPTH (m)  OCEPTH (m)  OCEPTH (m)  OCCO OCCO OCCO OCCO OCCO OCCO OCCO O	-001 -001 -001 -001 -001 -001 -001 -001	N	5TATION TIME (GMT)  O DAY HE 9 24 0 0	276  IL/10  SIGMA  260 260 261 263 2688 270 270 271 271 271 271 272	969  BARO-O 005  METER Imbbs  005  A-T  888  444  466  688  882  2288	ORIGIN CRUISE NO. WE 27 Q3 AR TE PRY SULR OR 18 PROFINE VOLUMENT NO. OR 19	NATOR'S   STATION   NUMBER   STATION   NUMBER   STATION   Number	00 vis. Cool cool cool cool cool cool cool cool	146  OEPTH 100  NO. OBS. NO. OBS. 14  VELO  VELO  144  144  144  144  144  144  144  1	MAX. 1 OFFITH OF OFFIT O	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	7516(CAST) NO.	CARD TYPE  STD OBS STD	OEPTH bm1  OOOO OOOO OOOO OOOO OOOO OOOO OOOO	-001 -001 -001 -001 -001 -001 -001 -001	N MATERIAL OF TILL OF	5TATION TIME (GMT)  O QAY HR 9 24 0  R WI AMN to Interest of the control of the c	2760 2600 2610 2600 2714 2714 2712 2728 2728 2738 2738	969 BAROO METERS (MAC) MACO MACO MACO MACO MACO MACO MACO MACO	ORIGIN CRUISE NO. 1 PRIVILE NO	ATOR'S   A	VIS. COOF COOF COOF COOF COOF COOF COOF COO	1440 1444 1444 1444 1444 1444 1444 1444	MAX. OBSTH. OF SYMPL'S  SPECE SYMPL'S  553  554  555  670  707  707  707  707  707  748  887  887	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	7516(CAST NO.	CARRO TYPE  STD OBS	OEPTH (m)  OCO OO	-001 -001 -001 -001 -001 -001 -001 -001	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5TATION TIME (GMT)  O DAY HER 9 24 0 0	276  IE   17/10   17/1	969  BARO-005  METERS (Imbs)  005  A-T  888888888888888888888999	ORIGIN NO.	ATOR'S   STATION   TO   TO   TO   TO   TO   TO   TO	00 VIS COORD	144 570 NO. OBS. NO. OBS. 14 144 144 144 144 144 144 144 144 144	MAX. 1 OFFITH OF SYMPLS STATE	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	7516(CAST NO.	CARRO TYPE  STD OBS ST	OEPTH (m1)  OOOOO OOOO OOOO OOOO OOOO OOOO OOOO	-001 -001 -001 -001 -001 -001 -001 -001	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	51ATION TIME (GMT)  O DAY HE 9 24 0 0	2760 2600 2610 2660 2702 2702 2702 2702 2722 2722 2735 2748 2748 2748 2748 2748 2748 2748 2748	7969 BABOL METER (Inhal) 1005	ORIGIN  CRUISE NO.  WE 2 03  AND 1E  PORE  PORE  AND 1E  AND 1	ATOR'S   STATION NUMBER   STATION NUMB	2000 00 00 00 00 00 00 00 00 00 00 00 00	1440   SOU VELO   1444   1444   1444   1444   1444   1444   1444   1445   1456	MAX. OBSTIME OF SYMPLS STREET OF STREET OF SYMPLS STREET SY	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	7516(CAST NO.	CARRO TYPE  STD OBS	OEPTH (m)  OOOOO OOOO OOOO OOOO OOOO OOOO OOOO	-001 -001 -001 -001 -001 -001 -001 -001	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5TATION TIME (GMT)  O DAY   PR   PR   PR   PR   PR   PR   PR   P	276  IE   17/10   17/1	969 METER (mbs) 005 A-T 888 4466688882228888844466668888844466688888444666888884446668888844466688888444666888884446666888884446666888884446666888884446666888884446666888884446666888884446666888884446666888888	ORIGIN CRUISE NO. WE 27 Q3 AR TE PRY SULR O01942 001879 001668 001182 0009856 0009856 0007966 0006968	ATOR'S   STATION   VILLEN	2000 00 00 00 00 00 00 00 00 00 00 00 00	146  OEPTH TO OTTOM 570  NO. OBS. 14  144 144 144 144 144 144 144 144 14	MAX. OBETH OF OF SYMPLS STREET SYMP	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	7516(CAST) # NO.	CARRO IVIDO N 070  STD OBS STD	OEPTH (m1  ODOO OOOO OO 10  OO 70 W  OO	-001 -001 -001 -001 -001 -001 -001 -001	N M M M M M M M M M M M M M M M M M M M	STATION TIME (GMT)  O DAY HE PLANTS (GMT)  OR STATION TIME (GMT)  OR STATION TIME (GMT)  S 34 :  S -4.  3245 3245 3245 3245 3225 3253 3253 325	276  IT 1/10  SIGMA  260 260 261 263 263 263 263 270 271 272 272 272 272 272 272 272 272 272	7969  BABOL METER (Inhal) 10005  A-T   1   1   1   1   1   1   1   1   1	ORIGIN  CRUISE NO.  WE 2 03  AND 1E  PORE  PORE  AND 1E  AND 1	ATOR'S   STATION   VILLEN	00 VIS COOR COOR COOR COOR COOR COOR COOR COO	146  OEPTH FOO OSTOM NO. OBS. VELO  144 144 144 144 144 144 144 144 144 1	MAX. GEFTH OF STMPL'S	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035
CTRY IO.	WE MESSENGE TIME O	7516(CAST NO.	CARRO TYPE  STD OBS	OEPTH (m)  OOOOO OOOOO OOOO OOOO OOOOO OOOOO OOOO	-001 -001 -001 -001 -001 -001 -001 -001	7 MATERIA TO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	STATION TIME (GMT)  O DAY HE PLANTS (GMT)  OR STATION TIME (GMT)  OR STATION TIME (GMT)  S 34 :  S -4.  3245 3245 3245 3245 3225 3253 3253 325	276  III 100  SIGMA  260 261 261 263 268 270 270 270 270 271 271 271 271 271 271 271 271 271 271	76 A R PO-00 MATTER INDICATE OF THE PO-00 MAT	ORIGIN CRUISE NO. WE 27 Q3 AR TE PRY SULR O01942 001879 001668 001182 0009856 0009856 0007966 0006968	ATOR'S   STATION   TO   TO   TO   TO   TO   TO   TO	00 10 <sup>2</sup> 10 <sup>2</sup> 00 19 37 51 73 99 23 45 66 66 66 66 66 66	146  OGETH TO NO. OBS. 14  144 144 144 144 144 144 144 144 14	MAX. OBSTIM OF SYMPLS S	OR H	PO4-P	THER CODE	TYPE AMT X 9		0	035

REFERENCE SHIP	LATITUD	E LC	NGITUDE MOCITUDE	MARSDEN SQUARE	STATION (GA	TIME	YEAR		ATOR'S TATION TUMBER		TO D	MAX. DEPTN DF	DBSE	WAVE RVATIO		WEA- THER CODE	CLDUD CODES	r	5	NODC TATION UMBER	
318160 WE	75250			259 59	09 24	048	1969			0	550		$\Box$			85	9			0036	
22020					TER	WIND	BAR			VIS.	ND. DBS.	SPECIA									
				COLO	TRANS. C	IR. OR	1		BULB		EPTHS	BSERVAT	IONS								
				DT	5 3	4 510	-	5 -006	-006		14										
MESSENGR	T		T		1 - 1 -			SPECIFIC VOLUM	E /	\ D	SOUHE			PO <sub>4</sub> -		IDTAL-P	NO2~N	NO3-N	SI D4-Si		5
TIME	CAST ND.	CARO	DEPTH (m)	2.1	s */.	. SIG	MA-T	ANOMALY-RI	DYN	. M. 10 <sup>3</sup>	VELDCI		2 ml/l	μg - ε		μg - at/l	1/10 - gu	μg - at/i	NS - 01/1	pΜ	C
HR 1/10					-				+-			_		-	$\dashv$						$^{+}$
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		STD	0000	-0023 -0023	3263 3263		523 523	001799	в 00	00	1444										
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		085	0010	-0024	3270		28				1445	52									
		STD	0020	-0110	3325		76	0012930	00	33	1442										
		OBS	0020	-0110	3325		76				1442										
		STD	0030	-0145	3340		89	001167	3 00	45	1440										
		085	0030	-0145	3340 3353		89 700	0010649	9 00	6.9	1440										
		STD OBS	0050 0050	-0150 -0150	3353		700	001004	, 00	00	1441										
		STD	0075	-0155	3360		706	001008	2 00	93	1441										
		OBS	0075	-0155	3360		706				1441	14									
		STD	0100	-0122	3373	27	715	0009170	0 01	18	1443										
		OBS	0100	-0122	3373		715				1443										
		STD	0125	-0064	3380		719	0008840	0 01	40	1446										
		OBS	0125	-0064	3380		719	000700	7 01		1446										
		STD 085	0150 0150	-0020 -0020	3395 3395		729 729	000788	7 01	01	1449										
		STD	0200	0078	3414		739	0006989	9 01	98	1455										
		OBS	0200	0078	3414		739	000070	_	, -	1455										
		STD	0250	0150	3427		745	000650	9 02	32	1459	92									
		085	0250	0150	3427		745				1459										
		STD	0300	0194	3442		753	000573	6 02	62	1462										
		085	0300	0194	3442		753	2025/2	. 03	10	1462										
		STD	0400	0221	3450 3450		758 758	000540	6 03	19	1465										
		OBS STD	0400 0500	0221 0184	3450		762	000498	2 03	70	1465										
		085	0500	0184	3452		762	000470	_ 03	, ,	1465										
		500	0200	0104		-															

REFERENCE CTM IO. CODE HO.	CODE	LATITU	DE LO	NOCITUDE NOCIE	MARSDEN SQUARE	STATION TIA	YEAR		TOR*S ATION UMBER	DEPTN TO BOTTOM	MAX. DEPTH OF S'MPL'S	OBSS	WAVE RVATIONS	CDD	CLOUD CODES		S	NOOC TATION IUMBER	
31816	OWE	7535	5N 06	9280W	259 59	09 24 0	63 1969	WE2 037	,	0490				85	ا و ا			0037	
							IND BABI		VIS.	ND.	SPEC	IAL							
					COLOS	TRANS DIR.	OR SPEED METE		WET COD	OBS. DEPTHS	DBSERVA	TIDNS							
							FORCE		0.20			-							
				Υ	DT	5 34	S08   95	5 <u>- 006 -</u>	022	13				_				1	
	MESSENGR TIME o HR 1/10	CAST ND.	CARD	DEPTH (m)	7 %	s */	SIG MA-T	ANOMALT		VELO		D2 ml/I	PO4~P µg - at/l	IDTA L-P µg = at/I	NO 2-N	NO3-N	\$1 Q4-\$i µg - 01/1		500
				1		1													П
			STD	0000	0000	3262	2621	0018170	0000	144	460		'	'	•	'	•		• •
	063		OBS	0000	0000	32620	2621			144	460								
			STD	0010	-0008	3275	2632	0017138	0018	144	460								
			085	0010	-0008	32750	2632			144									
			STD	0020	-0078	3326	2676	0012959	0033										
			085	0020	-0078	33260	2676		00.0	144									
			STD	0030	-0092	3335	2684	0012216	0045										
			OBS STD	0030 0050	-0092 -0119	33350 3350	2684 2697	0010969	0068	144									
			085	0050	-0119	33500	2697	0010363	0000	144									
			STD	0075	-0112	3363	2707	0009982	0095										
			085	0075	-0112	33630	2707			144									
			STD	0100	-0022	3379	2716	0009108	0119	144	483								
			085	0100	-0022	33790	2716			144	483								
			STD	0125	0013	3388	2722	0008591	0141	145	504								
			085	0125	0013	33880	2722			145									
			STD	0150	0054	3396	2726	0008207	0162										
			OBS	0150	0054	33960	2726		0300	145									
			STD	0200	0100	3412 34120	2736	0007283	0200										
			OBS	0200 0250	0100 0145	34120	2736 2746	0006397	0235	145									
			085	0250	0145	34280	2746	0000397	0233	145									
			STD	0300	0183	3440	2753	0005798	0265										
			085	0300	0183	34400	2753	0000170	0-00	146									
			STD	0400	0196	3450	2760	0005192	0320										
			OBS	0400	0196	34500	2760			146									

REFEREN	_	SHIP	LATITU	IDS	LONGITUDE	TATA	MAR	SDEN		ION	TIME			ORIGIN	ATOF	1*5	OEPT		MAX. DEPTH		WAV	'E		EA-	CLO	סט			NOOC	]
	ID. HO.	CODE	•	1/10	1/		10°	1.			NR.1/10	YEAR	١ ا		STATI		10 80110		OF S'MPL'S	l .	SERVA	TIONS PERT SI		TER DE	COL				TATION	
						_							$\dashv$						3 MPL 3	DIR	NGT	PER SI	Α		TYPE .				- BINIDER	
3181	160	WE	7542	188	069120	M I	259	1591			095 WIND			A ID TE			036				1 1	ł	ع ا	35 I	7	8 I			0038	
								COLOR	TRANS.	DIR	SPEE	D M	A RO-	•	w	VIS.	OBS		SPEC DBSERV											
								CODE	(m)	Dire	FORC		nbs)	BULB	801	LB	OEPT	HS	55561111											
								DT	s	34	508	0	02	-019	-02	25	12	1.												
		MESSENG TIME HR 1/10	T NO.	CAF		ქ (m)	Т	℃	2	٠/	SIG	MA-T		SPECIFIC VOLU		₹ △ 0 DYN. M X 10 <sup>3</sup>		ELOC		O2 ml/		14-P	TOTAL		NO2-		NO3~N µg - at/l	SI O4-S		200
													$^{+}$		_		$\top$		-		+			+		+	-			+
	,		•	s s	TD 00	00	-0	024	326	55	26	24	1	001784	1	0000	١,	44	40		-			- 1		- 1	'		1	11
		09	5	OB:				024	326			24		001.04	•	0000	_	44												
				S.		_		030	330		26	56		001482	9	0016	1	44	54											
				OBS		_		030	330			56						44												
				SI				102	333	-		82		001234	2	0030		44												
				0B3				102 114	333			92		001145		0043		44												
				089				114	334			92		001145	2	0042		442												
				51				121	335			01		001050	3	0064		442												
				085	00	50		121	335			01		001030	_	0004		442												
				51	rD 00	75	-0	112	336	3	27	07		000998	2	0089	_	443												
				OBS				112	336			07					1	443	34											
				51				085	337			15		000922	4	0113		445												
				OB 5				085 048	337		27			000075	_	0100		445												
				0B5				048	338		27	20		000875	>	0136		447												
				51				040	339		27	_		000797	5	0157		452												
				OBS				040	339		27			000191	9	0157		452 452												
				ST	D 020	0		115	341		27			000715	6	0195	_	456												
				OBS	020	0	0	115	341	50	27	37						456												
				ST		0	0	171	342	7	27			000666	7	0229		460												
				OBS				171	342		27						14	460	01											
				ST				186	343		27		-	000604	В	0261		461												
				085	030	10	0	186	343	70	27	50					14	461	17											

									_																
IO.	SHIP	LATITU	JOE .	LONGITUDE		ARSOEN		ON TI		EAR C		GINATO				MAX. CEPTH	015	WAVE		WEA					NOOC
NO.	COOF	•	1/10	1/10	Oz L	0, 1,	<u> </u>	DAY H		L	NO.	STAT			10	OF MPL'S		HGT PER		THER	CO	_ 1			TATION
8160	WE	7551	ON	068500w	2	59 58	09	24 ]	08 16	969 1	VE 2 (	139		03			Disc	1.01.12	300			-		_	
-100				000200#	, , , ,		ATER		INO	BARO-		TEMP.		N				1 1	ι	71	17	8 1		[	0039
						COLO	R TRANS	OIR.	SPEED	METER	ORY		/ET  Co	01	ic I	SPEC BSERVA									
							lm1	-	FORCE	(mba)	BOF	BI	ULB	UEF	1143										
						DT	ļs_	00	500	016	-019	<u> </u>	28	1.	2		*								
	MESSENGI TIME HR 1/10	T NO.	CARE TYPE		ni l	T *C	s	٠/	SIGMA		PECIFIC V		OYN.	M.	SOUNI		O2 ml/l	PO 4-		OTAL-P	NO2-		NO3-N	SI O4-Si yg - at/I	
	77.0				-		-		<del>                                      </del>				A "	-		-		-	-		-	-	/y - 0// 1	pg - 0.71	
,		1	I STI	D 0000	, '	0047	322	20	2585	ا :	1 6	0.5	1	_				1	- 1				-		l
	108	9	OBS	0000		0047	322		2585		0215	195	000		1447 1447										
			STI			0045	325		2609		0192	92	002		1448										
			OBS	0010	ı	0045	325		2609			-			1448										
			STI	0020	1	0015	328	36	2640	) (	0163	98	003		1447										
			OBS	0020		0015	328		2640	)				:	1447	73									
			STI			-0024	330		2657		0146	94	005	4	1446	50									
			085	0030		0024	330		2657						1446										
			STI			-0046	333		2679		0126	08	008		1445										
			OBS	0050 0075		-0046	333		2679						445										
			OBS	0075		-0038	335		2694 2694		0111	81	011		1446										
			STI			-0023	336		2703		0104	00	013		L446 L448										
			085	0100		0023	336		2703		0104	00	013		448										
			ST			0010	337		2710		0097	17	016		450										
			OBS	0125		0010	337		2710						450										
			ST	0150		0028	338	4	2718		0089	72	018		451										
			085	0150		0028	338		2718						451										
			STI			0097	340		2731		0077	94	022	3 1	455	7									
			085	0200		0097	340		2731						455										
			STE			0149	342		2741		0068	79	026		459										
			OBS	0250		0149	342		2741						459										
			STI 085	0300 0300		0173	343		2748		0062	47	029	_	461										
			000	0300		0173	343	3()	2748					3	461	7									

REFERENCE SHIP	LATITUO	DE LO	NGITUDE 50	SQU 10°	ARE	MO O	AY H	R,1/10	EAR	CRUISE NO.	OTANI TATZ MUN	ON	OEPTI TO BOTTO	M S'MPI	H OES	WAVE ERVATIONS HGT PER SI		CLOUG CODES	ī	\$1 N	NOOC TATION UMBER	
318160 WE	76003	3N 06	8300W	259	68 J			22 1		WEZ O	40 TEMP.	r	010	<u> </u>		1 1 1	171	7 8	1	1 (	0040	
					COLOR			SPEED	MARC	•		ET COL	NO.		ECIAL							
					COLOR	[m]	DIR	OR FORCE	(mbs)			LE COL	DEPTH	IS OBSE	2 NOIT AVE							
					DT	5	06	S16	022	-017	-0	28	06									
MESSENGR TIME O NR 1/10	CAST NO.	CARD TYPE	GEPTN (m)	ī	°C	s	٠/	SIGMA	т_т	SPECIFIC VO		₹ Δ ( 0YN, / 1 10 <sup>3</sup>	۸. ا	LOCITY	O2 ml/l	PO4-P µg = a1/l	10TAL-P pg = at/l		NO3-N yg - ot/l	SI O4-Si yg = al/I	рН	s C C
																						П
' '	' '	STD	0000	-0	020	305	0	245	1	00343	24	0000	) i	4421	•	•						
122		085	0000		020	305	00	245	1				1.	4421								
_		STO	0010		030	305		245		00342	82	0034		4418								
		OBS	0010		030	305		245						4418								
		STD	0020		010	318		255		00244	74	0064		4456								
		OBS	0020		010	318		255		00202	2.1	00.04		4456								
		STD	0030		022	323		259		00203	21	0088	-	4471								
		085	0030		022	323		259 264		00162	10	0123		4471 4461								
		STD	0050 0050		023 023	328		264		00102	13	012.		4461								
		OBS STD	0075		048	331		266		00137	36	0160	_	4458								
		085	0075	_	048	331		266		00137	-50	0.00		4458								
							•															

REFERENCE SHIP CODE LATITUD		GITUOE E	AARSOEN SOUARE	STATION T (GMT)	YEAR		TOR'S ATION IMBER	TO BOTTOM		WAVE SERVATIONS HGT PER SE	WEA- TNER COOE	CLOUD CODES		51	ODC ATION UMBER	
318160 WE 76082	N 069	9200W   2	59 69			WE2 041		0170	1	,	01	717	1	- 1	0041	
			WA.		SPEED MAT		VIS	NO.	SPECIAL	1						
			COLOR	TRANS. DIR.	OR (m)		WET COC	DEPTHS	OBSERVATIONS							
			DT	\$ 06	\$16 02	2 -017	028	09								
MESSENGR CAST TIME OF NO. NR 1/10	CARD TYPE	OEPTH (m)	7 7	s */	SIGMA-T	SPECIFIC VOLUA	E S △ C OYN. A x 10 <sup>3</sup>	A. 155	OCITY O2 ml/	PO <sub>4</sub> =P μg = α1/I	TOTAL-P Nto-gu		NO3-N	\$1 O4-\$i µg - ot/1	рН	SCC
																11
·	STD	0000	0020	3152	2532	0026667	0000		454							
138	085	0000	0020	31520					454							
	STO	0010	0015	3158	2537	0026182	0026		454							
	0B\$	0010	0015	31580					454							
	STO	0020	0015	3181	2555	0024419	0052		459 459							
	08S STD	0020 0030	0015	31810 3260	2555 2618	0018460	0073		479							
	085	0030	0032	32600		0010400	007.		479							
	STD		-0048	3319	2669	0013594	0109		454							
	OBS		-0048	33190			•		454							
	STD		-0043	3350	2694	0011236	0136	5 14	465							
	OBS	0075	-0043	33500	2694			14	465							
	STD	0100	-0014	3364	2704	0010290	0163		484							
	085		-0014	33640					484							
	STD		-0001	3369	2707	0009966	0188		495							
	OBS		-0001	33690					495							
	STD OBS	0150 0150	0010 0010	3375 33750	2711 2711	0009561	0213	-	505 505							

<del></del>	RENCE	SHIP			LONGITUDE	MARS		STATION	TIME		ORIGIE	IATO	R'S	DEPTH	MAX		WAVE	WEA	CLOUE	,			1
CODE	ID. NO.	COOE	LATITI	1/10	LONGITUDE 2	50u		(GM		YEAR		STATE		TO RDITDM	DEPTH	OES	ERVATIONS	THER	CODE		5	NDDC TATION	
						1	1	MO DAY			NO.	MUM	BEK		, 2,Wbr.	S OR	HGT PER S	EA CODE	TYPE AN	17	- 1	UMBER	
31	8160	IME	7600	ON	069470W	1259	69 WA	09 24	WIND	1969	WE2 04			0420		Щ,		72	7 8	1	- 1	0042	
							COLOR		SPEEC	RAR	0-	w.	VIS.	ND, OBS.		CIAL							
							CODE	(m)	FORC			BU		DEPTHS	OBSEKY	/A TIQNS							
							DT	S 10	516	02	4 -025	-o:	31	13									
		MESSENGI TIME		CA		1	℃	s .4.	SIC	MA-T	SPECIFIC VOLL		₹ Δ D	102	UND		PO <sub>4</sub> -P	TOTAL-P	NO <sub>2</sub> -N	ND. N	00.5		1
		HR 1/10	4 110.	TYI	E			,	310	m A - 1	ANOMALY-X	07	X 10 <sup>3</sup>		DCITY	O2 ml/l	/to - gu	Nie - gu	μg - σ1/l	ND3-N ug - 01/1	\$1 O4→\$i	pН	ć
														1							-	<del>                                     </del>	+
				S.	0000	00	003	3254	26	14	001879	5	0000	14	460		1	1	'	1	(	ı	11
		149	9	08			003	32540							460								
				S 0B 5			002	3258 32580	26		001848	1	0019		462								
				S1		-00		3325	26 26		001299	<i>,</i> .	0034		462 430								
				OBS		-00		33250			001233	*	0034		430								
				S1		-01		3336	26	85	001206	9	0047	-	422								
				085		-01		33360							422								
				S1 085		-01 -01		3350 33500	26°		001095	3	0070		423								
				ST		-01	_	3354	27		001057	۵	0097		423 419								
				OBS		-01		33540	27		001031	,	0091		419								
				ST		-00	86	3368	27		000967	9	0122		451								
				OBS		-00		33680	27					144	451								
				ST OBS		-00		3385	272		000855	3	0145	144									
				ST			50	33850 3396	277		000818	٠.	0166	144									
				OBS			50	33960	272		000010	+	0100	145									
				ST	D 0200		14	3412	273		000737	7	0205	145									
				OBS		01		34120	27:	35				145									
				ST		_	64	3426	274		000668	9	0240	145									
				OBS ST		01	_	34260	274		000401		02-0	145									
				085		01		3437 34370	275		000601	>	0272	146									
				ST		01		3445	275		0005493	3	0329	146									
				085	0400	01	87	34450	275					146									

EFE	RENCE	SHIP	LATITU	DE	LONGITUDE	DCTR	MARSDE		STAT	ION TI				ORIGI	NATOR	*\$	DEP		MAX. DEPTH		WAVE		WEA-	CLDU	o		NOI	DC ]	
300	ID. NO.	CODE		1/10	* '1/10		10°   1			DAY H		EAR	CRUIS		STATIO		ROTT	21	OF S'MPL'S		ERVAT		THER	CODE			TATE	ION	
3 7	8160	WE	7554	ON	070150w			_	$\neg$				_	_		LIN	-	$\rightarrow$	2 WLF.2	OIL	HGT PE	R SEA	+	TYPE A				DIR	
1	0100	W.C.	73341	OIN 1	OTOTOW			O (			73 19			2 04 AIR TI	43 EMP. T	:	050	-		L	1 1	ŀ	70	3 6	-1	1	00	)43	
									TRANS	OIR.	SPEED	METE	R	DRY	WE	T CO	DE OBS	š.   ,	SPEC OBSERV										
								DE	(m)		FORCE	(mbs	,	BULB	aut	.R	DEPT	HZ.											
	1						D	T	S	00	500	03	2 -	025	-03	1 7	14				_								
		MESSENGR TIME	CAST ND.	CARC		im I	τ 10		s	٠/	SIGMA	-7		HALY-E		₹ A I	AA '	SOUN		O 2 ml/l	PO <sub>4</sub>	P 1	TOTAL-P	NO <sub>2</sub> -N	NO3-1	5104	~5i		5
		HR 1/10					-						ANU	W V [ 1 1	10'	x 10		ELOC	CITY		h8 .	nt/l	µg = e!/I	yg - 01/	ug - 01/			pН	5
	1											- 1			-						T								П
		173		STI			-000		325		2613		00	1890	15	0000		44			•								'
		1/3		OBS	0000		-000		325		2613				,			44											
				OBS	0010		-001		325		2617 2617		00	1856	0	0019	_	44											
				STI			-006		330		2659		001	1453	7	0035		44											
				OBS	0020	)	-006	5	330	160	2659						_	44											
				STI			-013		334		2689	)	001	1169	2	0048	3 1	44	12										
				OBS	0030		-013		334		2689							44											
				OBS	0050		-0126 -0126		335		2697		001	1094	7	0071		44											
				ST			-0120		336		2697 2705		001	014	6	0097		442											
				OBS	0075		-0133		336		2705		001	1014		009	_	442	_										
				STO	0100	)	-0072	2	337	4	2714		000	927	5	0122	-	44											
				OBS	0100		-0072		337		2714						1	44!	59										
				STO OBS	0125		0035		338		2721		000	870	9	0144	_	45											
				STI			0035		338		2721				_			45]											
				085	0150		0080		339		2724 2724		000	843	9	0166		454 454											
				ST			0137		341		2735		000	738	5	0205		457 457											
				OBS	0200		0137		341		2735						_	457											
				STO			0130		342		2744		000	651	5	)240	1	458	83										
				OBS	0250		0130		342		2744							458											
				OBS	0300		0054		342		2749		000	601	0	0271		455											
				ST			-0029		342 343		2749 2758		000	513	2	0327		455 453											
				OBS	0400		-0029		343		2758		000	713	2 '	1521	_	453 453											
				STO			-0028	3	343	2	2759		000	496	9 (	377		455											
				OBS	0500	1	-0028	3	343	20	2759							455											

REFERENCE	T				MARSDEN	IT NOITATE	MF	ORIGINATO	R*5	DEPTH MA		WAVE	WEA-	Crona			NODC	
CTRY ID.	SNIP	LATITU	DE	LONGITUDE LONGITUDE	SQUARE	IGMTI	YEAR	CRUISE STAT	ION	10 00	OBSI	ERVATIONS	THER	CODES	J	S	TATION	
CODE NO.	1000		1/10	1/10 =	10. 1.	MO DAY N	R.1/10	NO. NUA	ABER	MIS MOLLOW	L'S DIR.	HGT PER SE	A CODE	TYPE AM	T		· OINIOLK	
318160	olwe l	7546	5N 1 C	70420W	260 50			WE2 044		0440	احطا		03	67			0044	
					WAT		SPEED MET		VIS.		PECIAL							
					COLOR	TRANS. DIR.	OR Lmb		JL8 CODE	DEPTHS OBSE	RVATIONS							
					DT	5 16	508 04	4 -012 -0	23 7	13								
					101	3 110	300   04	1 1	1	1								T.
	MESSENGR	LCAST NO.	CARD	DEPTH (m)	τ ℃	. s ./	SIGMA-T	SPECIFIC VOLUME ANOMALY-X107	DYH, M	, AEFOCITA	O2 m1/l	PO4-P pg • at/l	TOTAL-P	NO2-N ug - al/l	HO3-N	\$1 O4-Si		000
	HR 1/10	1	,,,,						x 10 <sup>3</sup>	12200111	-	) V - 0.71	pg - 0171	2g - 001	l/1a - gu	pg - 017 1		-
								1	1									
			STO		-0030	3262	2622	0018046	0000	14446								
	194		OBS	0000	-0030	32620	2622			14446								
			STO		-0030	3290	2645	0015900	0017	14452								
			OBS	0010	-0030	32900	2645	0011201	0022	14452 14421								
			STO	0020	-0115 -0115	3345 33450	2692 2692	0011381	0031	14421								
			OBS STC		-0127	3353	2699	0010726	0042	14419								
			0B5	0030	-0127	33530	2699	0010120	0012	14419								
			STO		-0125	3362	2706	0010031	0062	14424								
			OBS	0050	-0125	33620	2706			14424								
			STO		-0095	3373	2714	0009275	0087	14444								
			QBS	0075	-0095	33730	2714			14444								
			STD		-0064	3382	2720	0008696	0109	14464								
			OBS	0100	-0064	33820	2720			14464								
			STO		0048	3395	2725	0008249	0130									
			OBS	0125	0048	33950	2725	0007777	0150	14521								
			STO		0070	3403 34030	2731	0007771	0150	14536 14536								
			OBS	0150	0070 0032	3413	2731 2741	0006788	0187	14529								
			0B5	0200	0032	34130	2741	0000186	0101	14529								
			STO		0046	3424	2749	0006035	0219									
			OBS	0250	0046	34240	2749			14545								
			STD		0042	3428	2752	0005708	0248	14552								
			OBS	0300	0042	34280	2752			14552								
			STO		-0028	3432	2759	0004986	0302	14537								
			OBS	0400	-0028	34320	2759			14537								

REFERENCE SHIP LATITUDE CODE NO. 1/16	LONGITUDE SOI	STATION TIME (GMT)	YEAR CRUISE STATIC	ON TO GEPTH	OBSERVATIONS	WEA- CLOUD THER CODES CODE TYPE AMT	NODC STATION NUMBER
318160 WE 75400N	071110w 260	S1 09 24 238   WATER   WIND   COLOR TRANS. DIR. OR FORC	BARO- AIR TEMP. TO METER DRY WE (mbs) BULB BUL	CODE OBS. OBSERV	CIAL	70 6 8	0045
	ARO DEPTH (m)	T C S %. SIG	GMA-T SPECIFIC VOLUME	X 103 SOUND VELOCITY		AL-P NO2-N NO3-N - ot/l yg - ot/l yg - ot/l	Si O4-Si pq - ai/l pN 5 C
238 OF CONTRACT OF	0000 -0000 -000000	0020 32350 26 0022 3255 26 0022 32550 26 0112 3335 26 0112 33430 26 0121 33430 26 0121 33430 26 0127 3356 27 0110 3375 27 0110 3375 27 0110 3375 27 0127 3388 27 0072 3388 27	500 516 0018609 516 0012157 584 0012157 589 0011511 591 0010484 702 0010484 702 0009070 716 0009070 716 0008205	0000 14447 14447 0019 14450 0035 14421 14420 14420 0069 14422 14422 0093 14437 14437 0115 14461			
OF OF OF OF OF	0125 0125 0150 0150 0150 0150 0150 0150	3028     33950     27       3074     3398     27       3074     33980     27       30131     3419     27       34191     27     27       3420     27     27       3420     27     3420     27       3422     27     3422     27       3425     3422     27     3420     27       3427     3420     3420     3420     3420       3420     3420     3420     3420     3420       3420     3420     3420     3435     3435	727 726 0008175 726 0006964 740 0006500 744 0006500 744 0006001	0135 14512 14512 0155 14537 0193 14574 14574 0227 14556 0258 14539 14539 0313 14558			

REF	ERENCE	SHIP				L E	MARSOEN		TATION			0	RIGINA	TOR'S		DEPTH	MAX		_	WAV	F	WEA	- CLC	шьТ				7
CODE	IO.	CODE	LATITU		LONGITUDE	NDC	SQUARE		IGMI		YEAR	CRUISE		NOITA		10	DEPT				TIONS	THE	R CO	230		2	TATION	
	-	-		1/10	1/10	-	10° 1°	MC	YAD	HR.1/10		HO.	- NI	JMBER		BOTTOM	S'MPL	L°S C	OR.	HGT I	ER SE	COD	TYPE	AMT		_   N	UMBER	
1 31	8160	) WE	7532	ON	071350W	H. I.	[5 م 260		25		1969	WE2				0530						00	6	7			0046	,
							_	VATER	_	WIND	BAR	D	M TEM		VIS.	NO. OBS.	SP	ECIAL										
							COL		m) DIR	DR FDRCI	(mb)			W ET BULB	CODE	OEPTHS	OBSER	VATIO	NS									
							D1	rs	14		05	5 01	7	022	7	7.			-									
		MESSENG			-		101		114	1310	105			-		14		_			-		_					
		TIME	of NO.	CARC TYPE		(m)	1 %		s */	SIG	I-AN	SPECIFIC	VOLUM LY-X10 <sup>3</sup>	- I O	∆ 0, N. M.	, SON		02	mi/I		4-P	TOTA E-			NO3-N	SI O <sub>4</sub> —Si	рН	Š
		HR 1/10						-		-				١,	103	7,000	,			νg	• o1/I	VB + 01/	h8 - c	1/1	νg - a1/l	\la - gu		С
		I	l i		_	. 1				- 1											-		1					
		0.3		STI		-	0000		230	25		0020	617	00	000	144												
		01	4	OBS STI	000 001		-0014		2300 260							144												
				085	001		-0014		2600	26 26		0018	260	U	19	144												
				STI			-0125	-	336	26		0012	042	00	35	144												
				OBS	002	0	-0125		3360			0012			,,,	144												
				ST(		-	-0140		344	26	92	0011	379	00	)46	144												
				OBS	003		-0140		3440							144	11											
				STO			-0144		357	27		0010	359	0.0	968	144	14											
				OBS	005		-0144		3570							144												
				OBS	007	-	-0118 -0118		368 3680	27: 27:		0009	579	00	93	144												
				ST		-	-0095		378	27		0008	881	0.1	16	144												
				OBS	010		-0095		3780			0000	001	0.	. 10	144												
				STE	012	5	0010		395	27		0008	043	01	37	145												
				OBS	012	5	0010	3	3950	27	28					145												
				STO			0048	_	397	27;		0008	097	01	57	145	25											
				OBS	0150		0048		3970	277						145												
				STI OBS			0150		420	27:		0007	024	01	95	145												
				STE	0200		0150 0152		4200 428	273		0006		0.5	200	145												
				OBS	0250		0152		4280	274		0006	448	02	29	145												
				STO			0190		445	279	-	0005	477	0.2	259	145												
				OBS	0300		0190		4450	279		0005	***	0.		146												
				STO	0400	0	0199	3	450	279		0005	218	03	12	146												
				085	0400		0199		4500	275						146												
				STO	_		0138		451	276		0004	679	03	62	146												
				OBS	0500	J	0138	3	4510	276	5					146	31											

EFERENC	_	SHIP	LATITU	DE .	LONGITUDE	DRIFT	MARSOEN SOUARE	72	ATION		YEAR			S'ROTAL		OEPTH	MAX		WAVE SERVATIO	ale.	WEA-		ouo			1000
DE N		COOE	•	1/10	1/10	O Z	10° 1°	MO		HR,1/10		CRUIS		STATION NUMBER		BOTTOM	S'MPL		HGT PER		THER		ZSOC			ATION
3181	60	WE	75250	ON C	72020W		260 52	09	25	028 1	969	WE:	2 04	7		0570		-	1101111	11.0	7.0					
	-				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			ATER	192	WIND	BAR			MP. °C		NO.			]	l	73	1 3	18	I	1	0047
							COL			SPEED	MET	ER	ORY	WET	CODE	OBS.		ECIAL VATIONS								
							cod	-	<u>'                                    </u>	FORCE	(mbi	1.5	BULB	BULB		OEPTHS										
	٦						DI	S	14	508	05	1 -0	011	-011	4	14										
	ŀ	MESSENGR TIME	CAST NO.	CARD	OEPTH (	ml	D* T		s ·/	SIGM	A-T		IC VDLU		£ △ 0 NN. M.		ОИП	02 ml/	PO4~	P 1	DTAL-P	NO <sub>2</sub>	-N	NO3~N	SI O 4-Si	
		HR 1/10	1									AND	MALY-E		x 103	VELO	OCITY	03 1110	10 - 9ע	1/1 3	Nts + gv	nB -	ol/I	µg - a1/l	μg - ol/l	pН
	- [		1																							
				STD			-0040		260	262	1	00	1816	1 0	000	14	441 '		ı	-	1	1	'			
		028		OBS	0000		-0040		2600							14	441									
				STO			-0045		260	262		001	1813	7 0	018		440									
				OBS	0010		-0045	-	2600								440									
				STD			-0130		327	267		001	1271	8 0	034		412									
				OBS	0020		-0130		3270								412									
				OBS	0030		-0148	_	347	269		001	1112	8 0	045		408									
				STD			-0148 -0148		3470 358						0		408									
				OBS	0050		-0148		3580	270 270		00.	1027	1 0	067		413									
				STD			-0149		362	270		000	994	5 A	002		413									
				OBS	0075		-0149		620			000	J774	5 0	092	144	417									
				STD			-0140		68	271		000	949	6 0	116	144										
				OBS	0100		-0140	_	680	271		000	,,,,,	0 0	-10	144										
				STO			-0080		884	272		000	0846	٥	139	144										
				OBS	0125		-0080		840	272		000	JO 40	, ,		144										
				STO			-0008		93	272		000	809	9 0	160	144										
				OBS	0150	)	-0008		930	272		000	,00,	, ,	-00	144										
				STD	0200	)	0090	34	14	273		000	706	6 0	198	145										
				OBS	0200	)	0090	34	140	273	8					149										
				STD			0130	34	26	274	5	000	0643	9 0	231	149										
				OBS	0250		0130		260	274	5					149	583									
				STO			0160		37	275		000	)584	5 0	262	146	506									
				OBS	0300		0160		370	275						146										
				STD			0227		52	275		000	1530	8 0	318	146	554									
				OBS	0400		0227		520	275						146										
				STD	_		0168		51	276		000	)4923	3 0	369	146										
				083	0500	,	0168	34	510	276	3					146	545									

COOF COOF	MARSDEN SQUARE	STATION TIME   YEAR   MO   DAY   HR.1/10	ORIGINATOR'S CRUISE STATION NO. NU MBER	BOTTOM OF	WAVE ORSERVATIONS THE COL	ER CODES STATION
110	2300W 260 52	09 25 040 1969		0550	85	
910100 WE 179100N 107	WA	TER WIND BAR	IO- AIR TEMP. C	NO. SPECIAL		
	CODE	TRANS. DIR. OR MET	osi BULB BULB	DEPTHS OBSERVATIO	431	
	DT	S 14 S08 05		14	<del></del>	
MESSENGE CAST CARD TYPE	OEPTH Im1 T ℃	S '%. SIGMA-T	SPECIFIC VOLUME OYN. N ANOMALY-X10? X 103	VELOCITY 02	ni/  PO4+P TOTAL- μg - αi/  μg - αi,	
HK 1/10						
STD	0000 -0033 0000 -0033	3255 2617 32550 2617	0018570 0000	14444		
040 0BS STD	0000 -0033 0010 -0037	3264 2624	0017861 0018	14445		
OBS STD	0010 -0037 0020 -0125	32640 2624 3332 2682	0012348 0033	14445		
OBS	0020 -0125	33320 2682		14415		
STD OBS	0030 -0147 0030 -0147	3344 2692 33440 2692	0011361 0045	14408		
STD	0050 -0150 0050 -0150	3355 2701 33550 2701	0010496 0067	14411		
OBS STO	0075 -0148	3365 2710	0009718 0092	14418		
OBS STD	0075 -0148 0100 -0120	33650 2710 3370 2713	0009406 0116	14418		
OBS	0100 -0120	33700 2713		14436		
STD OBS	0125 -0072 0125 -0072	3383 2722 33830 2722	0008578 0139	14464		
STD	0150 -0010	3393 2727	0008089 0160	14498		
OBS STD	0150 -0010 0200 0067	33930 2727 3410 2736	0007224 0198	14498		
OBS	0200 0067	34100 2736	0006303 0333	14544		
STO OBS	0250 0120 0250 0120	3427 2747 34270 2747	0006293 0232	14578 14578		
STD OBS	0300 0153 0300 0153	3436 2752 34360 2752	0005867 0262	14603		
STD	0400 0180	3447 2758	0005285 0318	14633		
OBS STD	0400 0180 0500 0180	34470 2758 3452 2762	0004948 0369	14633 14650		
OBS	0500 0180	34520 2762		14650		
REFERENCE SHIP LATITUDE LO	NGITUDE ES MARSDEN	STATION TIME (GMT) YEAR	ORIGINATOR'S	OEPTH MAIL TO DEPTH	WAVE WE	
CODE NO. CODE LATITUDE LO	NGITUDE SQUARE	MO DAY HR.1/10	CRUISE STATION	POTTON OF L	R HGT PER SEA CO	
318160 WE 76599N 07	1340w    260  61	09 27 239 1969	AID TEMP T	0720	_	1   X   9   0049
	COLOR	TRANS. DIR. SPEED MET	ER DRY WET COD	NO. SPECIAL	us	
	DT	S 00 500 20		16	$\dashv$	
MESSENGR CAST CARD	DEPTH (m) T °C	S %. SIGMA-T	SPECIFIC VOLUME SAO	SOUND O2	nI/I PO4-P TOTAL	
HR 1/10 TYPE			ANDMALT-X107 X 103	AEFOCITA A	νg - αι/l μg - αι,	/I ug - at/I ug - at/I c
STO	0000 -0010	3175 2551	0024784 0000	14443		(
239 OBS	0000 -0010	31750 2551		14443		
STD 08S	0010 -0020 0010 -0020	3184 2559 31840 2559	0024050 0024	14441		
STO	0020 -0023	3185 2560	0023957 0048			
OBS STD	0020 -0023 0030 -0020	31850 2560 3195 2568	0023198 0072	14442		
OBS STD	0030 -0020 0050 -0012	31950 2568 3269 2627	0017565 0113	14446		
OBS	0050 -0012	32690 2627		14464		
STO OBS	0075 -0025 0075 -0025	3302 2654 33020 2654	0014979 0153	14466		
STO OBS	0100 -0040 0100 -0040	3333 2680 33330 2680	0012538 0188			
STD	0125 -0040	3339 2685	0012071 0219	14473		
OBS STD	0125 -0040 0150 -0040	33390 2685 3347 2691	0011452 0248	14473 14478		
OBS	0150 -0040	33470 2691		14478		
STD OBS	0200 -0010 0200 -0010	3378 2715 33780 2715	0009220 0300	14505 14505		
STD	0250 0029	3390 2723	0008513 0344			
OBS STD	0250 0029 0300 0080	33900 2723 3417 2741	0006784 0382	14567		
OBS STD	0300 0080 0400 0078	34170 2741 3431 2753	0005722 0445	14567 14585		
OBS	0400 0078	34310 2753		14585		
STD OBS	0500 0079 0500 0079	3437 2757 34370 2757	0005287 0500	14603		
	0200 0017					
STD	0600 0080	3439 2759	0005155 0552			
OBS STO	0600 0080 0600 0080 0700 0082	3439 2759 34390 2759 3442 2761	0005155 0552 0004957 0603	14620 14638		
OBS	0600 0080 0600 0080	3439 2759 34390 2759		14620		

											,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,											
REFERENCE	SHIP	LATITU	105	ONGITUDE #2	MARSDEN SQUARE	STATION TIA	A E	YEAR		RIGINA			DEPTH	MAX. DEPTH	Desi	WAVE ERVATIONS	WEA-	CLDUD			NODC	
CODE ND.	CODE	•	1/10	1/10 83		MO DAY HR	1/10	TEAR	CRUISE ND.		I ATION UMBER		BOTTOM	OF S'MPL"S		HGT PER SEA	CODE	TYPE AM			STATION NUMBER	
318160	WE	7651	ON O	71580W	260 61		15 ND	1969	WEZ	050			0810				71	X   9			0050	
					CDLOR	TRANS. DIR	SPEED	BAR	ER D	RY TEN	WET	VIS,	ND. OBS. DEPTHS	SPEC	ATIONS							
					CODE	Im1	FORCE SOO	20		JLB 17 -	-022	7	17									
	MESSENGR TIME	CAST	CARD	1	TOT				SPECIFIC		,r \$	Δρ	· SOL	IND		PO4-P	IDTAL-P	NO2-N	ND <sub>3</sub> -N	51 04-		s
	TIME HR 1/10	ND.	TYPE	DEPTH (m)	τ ℃	s */	SIG	AA-T	ANOMA	LLY-XIO	7 DY	10 <sup>3</sup>	VELC		02 ml/I		µg + a1/1:	1/10 - gu	pg - 01/1	h0 - al		c
																						T
	015		STD OBS	0000	-0044 -0044	3285 32850	26		0016	5232	2 00	000	144	443 443								
			STD	0010	-0049	3285	26	42	0016	5208	3 00	16	144	442								
			OBS STD	0010 0020	-0049 -0059	32850 3287	26		0016	5013	00	32	144									
			OBS STD	0020 0030	-0059 -0051	32870 3316	26		0013	3819	9 00	)47	144									
			OBS	0030	-0051	33160	26	67					144	449								
			STD OBS	0050 0050	-0045 -0045	3332 33320	26		0012	2612	2 00	74	144									
			STD	0075	-0048	3348	26		001	1368	0 1	04	144	+62								
			OBS STD	0075 0100	-0048 -0048	3382P 3360	27	20P D2	0010	)442	01	31	144	468								
			OBS STD	0100 0125	-0048 -0009	33600 3367	270		0010	0079	0.1	57	144									
			OBS	0125	-0009	33670	27	06	0010	,,,,	, 02		144									
			STD OBS	0150 0150	0012 0012	3374 33740	27		0009	9647	01	81	145									
			STD	0200	0090	3404	27	30	000	1824	02	25	145	554								
			OBS STD	0200	0090 0109	34040 3412	27:		000	7351	02	263	145									
			OBS	0250	0109	34120	27		0006	. 727	, 03	98	145									
			STO OBS	0300 0300	0073 0073	3417 34170	27		0006	0131	02	98	145									
			STD	0400 0400	0067 0067	3430 34300	27		0005	722	2 03	60	145									
			STD	0500	0083	3438	27	58	0005	240	04	15	146	505								
			OBS STD	0500 0600	0083 0090	34380 3441	279		0009	080	04	67	146									
			OBS	0600	0090	34410	276		0004	770	. ^5	16	146									
			STD OBS	0700 0700	0088 0088	3445 34450	276		0004	,,,,	, 02	,10	146									
			STD	0800 0800	0090 0090	3445 34450	276		0004	809	05	64	146									
			555	5000	00,0	330								,								
REFERENCE				-	MARSDEN	STATION TIM	ı E		1 0	RIGINA	TOR'S	7	DEBTN	MAX.		WAVE	WE A	CLOUD				1
CTRY ID.	CODE	LATITU		NGITUDE NOTION	SOUARE	{GMT}		YEAR	CRUISE ND.	, 51	ATION UMBER	$\dashv$	DEPTH TO BDTTDM	DEPTH OF S'MPL"	OBSI	ERVATIONS	THER CDDE	CODES			NODC STATION NUMBER	
318160	WE	7652	0N 0	72220W		MO DAY HR.		1969		051		-+	0360	3 MPL	DIR	HGT PER SEA	01	X 9			0051	
. 510100		1052	014 1 0	12220W	WAT	ER WI		BAR	)- A	IR TEM	1P. °C	VIS.	NO. OBS.		CIAL		, 0-	, ,,,,		'		'
					COLOR	TRANS. DIR.	OR	(mb)		RY JLB	BULB	CODE	DEPTHS	OBSERV	ATIONS							
					та	S 19	506	21	0 -0:	39	-050	8	12			,					,	
	MESSENGI TIME	CAST NO.	CARD TYPE	DEPTH (m)	1 °C	s %.	SIGA	AA-T	SPECIFIC		AE DY	△ D N. M. 10 <sup>3</sup>	. SOU		0 2 ml/l		P - 101A ور ا/10 - ور	NO2-N ug = al/l	NO3-N µg - ol/l	51 O4-		S C
	HR 1/10			1							<b>^</b>	10	+									+
			STD	0000	-0074	3295	26		001	357	7 00	000	144									
	028	1	OBS STD	0000 0010	-0074 -0070	32950 3298	26		0015	136	5 00	15	144	430 434								
			OBS STO	0010 0020	-0070 -0062	32980 3310	26! 26!		0014	241	0.0	30	144									
			OBS	0020	-0062	33100	26	52					144	441								
			STD OBS	0030	-0057 -0057	3317 33170	26		0013	3720	) 00	44		446 446								
			STD	0050	-0068	3333	26	81	0012	2445	00	70	144	447								
			OBS STD	0050 0075	-0068 -0056	33330 3360	26		0010	0418	3 00	99	144	447 460								
			OBS	0075	-0056	33600	27	02					144	460								
			STD OBS	0100 0100	-0043 -0043	3372 33720	27 27	11	0009			24	144	472								
			STD OBS	0125 <b>01</b> 25	-0064 -0064	3377 33770	27 27		0009	9069	01	47	144									
			STD	0150	-0008	3390	27	24	0008	3327	7 01	69	144	499								
			OBS STD	0150 0200	-0008 0112	33900 3409	27. 27:		000	7590	0 0 2	208	144									
			OBS STD	0200	0112	34090	27	33					149	564								
			OBS	0250 0250	0121 0121	3420 34200	27		0006	0829		244	145									
			STD OBS	0300 0300	0091 0091	3424 34240	27	46	0006	5328	3 02	277	149	573								
				0300	0371	J - 2 - 0	C 1	+0					14:	- 1 -								

																			_								
REFERENCE	SHIP				DRIFT	MARS		STA	TION (GM1		MEAN		ORIGIN	IATOR	<b>'</b> S	DEPT	DEPT		WAVE		WEA		LOUD	İ		NODC	
CTRY ID.	1 CODE	LATITUE	3/10 L	1/10 °	DEL	10°		моТ	-	HR.1/10	YEAR	CRUISI NO.		STATIO HUME		01108	OF	000	HGT PE		COD		E AM	-		UMBER	
1													0.5			^						1				0063	1
31816	OIME	76450	O NC	73270W	1	ا 260	63 I			WIND		IWE2	AIR TE			016		_	1 1	1	1 70	1 7	7   5	ı	- 1	0052	\$
						1		TRAN	+-	SPEE			ORY	WE		OBS.	0.0000	ECIAL VATIONS									
							CODE	lm)	Ota	FORC		1) 1	BULB	BUI	.В	OEPTH	3										
							DT	S	19	506	20	5 -0	139	-05	8 0	09											
	MESSENG		CARD	DEPTH		1	4~	Ι.	/	510	MA-T	SPECIFI	C ADIA	IME	₹ ∆ D	1 3	DUND	O2 ml/l	PO	_P	TOTAL-	NC	) <sub>2</sub> -N	NO3-N	St O4-5	рН	S
	HR 1/10		TYPE	DEFIN	un I	'	C	1	***	310	-ma-1	ANDA	AALY-R1	107	x 10 <sup>3</sup>	· VI	LOCITY	02 111171	νg -	01/1	yg • o1/l	μg	- 01/1	yg - ol/l	μg - 01/	PIN	c
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	'	,	STD	000	0	-01	154	32	80	25	83	002	181	9	0000	-	4380										
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			STD	001		-01			18		91	002	103	7	0021		4383										
			OBS	001		-01			180		91					_	4383										
			STD	002		-01			19		92	002	094	7	0042		43B3										
			OBS	002		-01			190		92						4383										
			STD	003		-01		_	40		808	001	934	1	0063		4392										
			OBS	003	-	-01	50		400	_	808				_		4392										
			STD	005		-01	_		86		45	001	589	9	0098	_	4420										
			OBS	005		-01			860		45						4420										
			STD	007		-01			28		78	001	270	2	0134	_	4435										
			OBS	007		-01		_	280		578						4435										
			STD	010		-00		_	50		95	001	106	3	0163	_	4450										
			OBS	010		-00			500		95					_	4450										
			STD	012		-00		-	62		704	001	019	3	0190		4463										
			OBS	012		-00			620		704						4463										
			STD	015		-00	_		90		725	000	828	3	0213		4495										
			OBS	015	0	-00	17	33	900	2	725					1	4495										

318160   WE   75426N   074100W   260   54   09   28   067   1995   WE   2053   0450	CODE SHIP LATITUDE CODE 1/30	ONGITUDE SOUARE SOUARE	STATION TIME IGMTI YEAR	ORIGINATOR'S CRUISE STATION NO. NUMBER	BOTTOM OF	WAVE BSERVATIONS THER CODE	CLOUD CODES	NOOC STATION NUMBER
COLOR   IMMIN   COLOR   COLO	318160 WE 75426N 0	74100W 260 54	09 28 067 1969	WE2 053	0450	_	7 5	0053
MISSEMENT   CAST   CA			BAR	0- VIS.				
DT   S   DO   SOO   216   D39   D50   S   13		cor	OR OR			S		
MISSINGE   CAST   CARD   CIPTN   m)		Τα		6 -039 -050 8	13	1		
TIME   4   NO.   TIPE   06FTN   MI   TE   3   7.   316MA-T   ANDMAST-SIEP   TIN, M.   VELOCITY   197   MI   197	MESSENGR CAST CARD			SPECIFIC VOLUME   \$ A D	SOUND	PO 8 TOTAL 8	NO- N NON SIO	e. s
STD 0000 -0150 3130 2519 0027831 0000 14371  067 0BS 0000 -0150 31300 2519 14371  STD 0010 -0150 3200 2576 0022434 0025 14383  0BS 0010 -0150 32000 2576 14383  STD 0020 -0138 3230 2600 020146 0046 14394  OBS 0020 -0138 3230 2600 14394  STD 0030 -0125 3269 2631 0017176 0065 14408  OBS 0030 -0125 3269 2631 14408  STD 0050 -0128 3282 2642 0016156 0098 14411  OBS 0050 -0128 3282 2642 0016156 0098 14411  OBS 0050 -0128 3282 2657 0014716 0137 14435  OBS 0075 -0093 3302 2657 14435  OBS 0100 -0116 3332 2682 0012328 0171 14432  OBS 0100 -0116 3332 2682 012328 0171 14432  STD 0125 -0102 3370 2712 0009456 0198 14448  OBS 0125 -0102 3370 2712 0009456 0198 14448  OBS 0150 -0061 3375 2715 000925 0221 14472  OBS 0150 -0061 3375 2715 000925 0221 14472  OBS 0150 -0061 3375 2715 000925 0221 14472  OBS 0200 0076 3400 2728 0008038 0265 145547  OBS 0250 0022 34040 2734 0007410 0303 14551  STD 0300 0045 3422 2747 0006181 0337 14552  OBS 0300 0045 3422 2747 0006181 0337 14552  OBS 0300 0045 3422 2747 0006181 0337 14552  OBS 0300 0045 3422 2747 0005292 0395 14561	TIME OF NO. TYPE	OEPTN (m) T C	5 %. SIGMA-T	ANDMAIN, VIDT DING A				01/I PH C
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REFERENCE	SHIP	LATITU	05	ONGITUOE 2		SOEN	STATION T	IME	YEAR		RIGINATO		DEPTN	MAX. OEPTH	OBS	WAVE ERVATIONS	WEA-	CLOUD		Ι,	NODC	
CTRY ID.	COOE	. LATITO	1/10	ONGITUOE	10°	1.	MO OAY			CRUISE HO.	TAT2 AUN		80T10#	0.5	00,	HGT PER SE	- 6006	TYPE AMT			TATION	
318160	WE	7640	BNIO	74490W	260	64	09 28	880	1969		054	to	0470	Щ	Щ,		01	7 7			0054	
						COLOR	TRANS. OIR	SPEE	111611	R DR		- VII	NO. OBS. DEPTHS	SPE OBSERV	CIAL /ATIONS							
						CODE	100.)	FOR	CE (mbi		-	-	_									
	MESSENGE				1	DT	5 00	500	21			50 8	13			1000						
	MESSENGR TIME ( HR 1/10	HO.	CARD TYPE	DEPTH (m)	Ī	°C	s ./	ZIC	MA-T	ANOMA	LY-X107	OYN. A X 10 <sup>3</sup>	A. 1 1/61	OCITY	O2 ml/I	PO4-P µg = 01/1	TOTAL-P µg = at/l	NO2-N µg - 01/l	NO3-N ug - al/l	SI O4-Si ug - o1/I		Ć
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	088		STD	0000		130 130	3140 31400		527 527	0027	101	0000	_	382								
	000		STD	0010		152	3146	25	532	0026	585	002		374								
			OBS STD	0010		152 146	31460 3175		532 556	0024	356	0052		374								
			OBS	0020	-0	146	31750	25	556				14	383								
			ST0 OBS	0030		133 133	3208 32080		582 582	0021	840	0079		395 395								
			STD OBS	0050 0050		117 117	3249 32490		515 515	0018	719	0116		412								
			510	0075		108	3294		551	0015	279	0158		427								
			OBS STD	0075 0100		108 102	32940 3317		551 569	0013	523	0194		427 437								
			OBS	0100	-0	102	33170	26	669				14	437								
			STD OBS	0125 0125		095 095	3342 33420		589 589	0011	622	0226		448								
			STD	0150		094	3343		90	0011	537	0255		452 452								
			OBS STD	0150 0200		094 072	33430 3394		590 730	0007	711	0303		478								
			OBS STD	0200 0250		072 044	33940 3412		730 744	0006	453	0338		478 502								
			085	0250		044	34120	27	744				14	502								
			STD OBS	0300		032	3420 34200		750 750	0005	894	0369		517 517								
			STD	0400	-0	008	3430		757	0005	251	0425		546								
			STD OBS	0500 0500		015 015	3433 34330		758 758	0005		047	1 4	573 573								
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REFERENCE CTRY IO.	SHIP	LATITU	OBS			015		27	758	0005		0477	0 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1 4 1	573	Oes	WAVE ERVATIONS	WEA- THER	CLOUD			HOOC TATION	
CTRY IO.	3000	•	OBS	0500	MAR SOU	O 1 5	STATION TIGMEN	27 TIME	758 758 YEAR	OO O S	155 RIGINATO	0475	0EPTH TO 80TTO	MAX DEPTH OF S'MPL"			A CODE	TYPE AM			TATION	
CTRY ID.	3000	1ATITU 7637	OBS	0500	MAR SOU	O 1 5	STATION TO IGMTI	2 T	758 758 YEAR	OOO5	155	O 4 7	0 4 3 0	MAX DEPTH OF S'MPL	S DIR	ERVA TIONS	THER	CODES			TATION	
CTRY IO.	3000	•	OBS	0500	MAR SOU	SDEN ARE	STATION TO IGMTI	27 TIME  HR.1/TD  105 WINO  SPEE	758 758 YEAR 1969	OOO5  CRUISE NO.  WE2	155  RIGINATO STAT NUA  055 R TEMP.	O 4 7	0 4 3 C NO.	MAX DEPTH OF S'MPL'		ERVA TIONS	A CODE	TYPE AM			TATION	
CTRY IO.	3000	•	OBS	0500	MAR SOU	SDEN ARE	STATION TIGMTI MO OAY II 09 28 TER TRANS. GIR	27 TIME  HR.1/10 105 WINO SPEE	758 758 YEAR 1969 B &ARCH (Mb)	OOO5	RIGINATO STAT NUA  055 R TEMP. RY W BI	O 4 7 7	OEPTH TO BOTTO!  O 4 3 C NO. OBS.	MAX DEPTH OF S'MPL'	SOIR	ERVA TIONS	A CODE	TYPE AM			TATION	
CTRY IO.	WE MESSENGR	7637	OBS  DE 1/10 2N 0	0500	0 MAR SOU 10° 260	SDEN ARE 1. 65 WA COLOR CODE	34330  STATION 1 IGM1)  MO OAY   09 28  TER	2 TIME  HR.1/TD  105  WINO  SPEE OR FORE  SO 4	758 758 YEAR 1969 B &ARCH (Mb)	OOO5  CRUISE NO.  WE2  O- AI RU  1 -O3	155  RIGINATO STATINUA  055 R TEMP. RY W. BI 44 - O	O 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	0 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	MAX DEPTH OF S'MPL'	SOIR	ERVATIONS HIGH PER SE	THER CODE	CODES	ио <sub>3</sub> -и	5104-5	OO55	50
CTRY IO.	wE WE	7637	OBS	0500 .ongituot . 1/10 .75360W	0 MAR SOU 10° 260	SDEN ARE  1. 65  WA COLOR CODE	STATION 1 IGM1) MO OAY 10 O9 28 TER TRANS. OIR. S 23	2 TIME  HR.1/TD  105  WINO  SPEE OR FORE  SO 4	758 758 YEAR 1969 RARY METI (mb)	0005  CRUISE NO.  WE 2  AI RU 1 -03	155  RIGINATO STATINUA  055 R TEMP. RY W. BI 44 - O	O 4 7 7 100 NABER	0 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	MAX DEPTHOF OF SYMPL'	S OIR.	ERVATIONS	THER CODE	TYPE AM	NO3-N NO3-01/I		OO55	NO.00
CTRY IO.	WE MESSENGR	7637	OBS  DE 1/10 2N 0  CARD TYPE	0500  ONGITUDE 66 1/1/10 66 7/1/10 6	0 MAR SOU 10° 260	SDEN ARE  1. 65  WA COLOR CODE DT	34330  STATION 1 GMTI MO GAY II 09 28  TER	TIME  HR.1/TD  105  WIND  SPEE OR FOR  SIG	YEAR 1969  BART (mb) (mb) (4 23)	OOO5  CRUISE NO.  WE2  O- AI RU 1 -03	155  RIGINATO  STAT  NUA  055  R TEMP.  144  054  VOLUME  LY-X107	O 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	OEPTH TO BOTTON O 4 3 () NO. OEPTH 13	MAX DEPTHA OF S'MPL'	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	SCC
CTRY IO.	WE MESSENGR	7637	OBS  DE 1/10 2N 0  CARD TYPE  STC OBS	0500  ONGITUDE 1000  1/10  OEPTH (m)	0 MAR SOU 10° 260	SDEN IARE 1. 65 WA COLOR CODE DT	34330  STATION 1 IGM1  MO 047 Ji O9 28  TER  TRANS 0IR S 23  5 .4.	27  IME  HR.1/10  105  SPEE OR FORCE  SIG	758 758 1969 8ARI (MET) (MET) (4 23	OOO5	155  RIGINATO  STAT  NUA  055  R TEMP.  RY  B BB  64 - 0	0477	0 4 3 0 NO. 085. 0EFTH: 13	MAX DEPTHA OF S'MPL' OBSERV	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	\$000
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	CARD TYPE  STD OBS  OBS	0500  ONGITUDE 1000  OEPTH (m)  OOOO  OOOO  OOOO  OOOO  OOOO	0 MAR SOUL 10° 260 -0 -0 -0 -0 -0	015  SDEN   1.   65   WA   COLOR   CODE   DT   %   COLOR   CODE   DT   %   COLOR   CODE   COLOR   CODE   COLOR   34330  STATION 1 IGMTI MO GAY I 09 28  FER	27 TIME  HR.1/105  WIND  SPEE OR SICCE  25 25 25 25 25 25 25 25 25 25 25 25 25 2	758 758 1969 1969 8ARR METI (mb) 4 23 5MA-1	OOO5  CRUISE NO.  WE 2  OF OF OR OF OR OF OOO 25  OO 24	155  RIGINATO  STATI NUA  055 R TEMP.  277 VOLUME LY-x107	0477  OR'S  TON AGER  TO VIS T	OEFTH TO SO SO VEI	MAX DEPTHOF OF SYMPLICATION OF STATE OR SERVICE OR SERV	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	S C C	
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	CARD TYPE	0500  ONGITUDE 1000  OEPTH (m)  OOOO  OOOO  OOOO  OOOO  OOOO	0 MAR SOU	015 SDEN   ARE   1.   65   WA   CODE   DT   % 148   148   152	34330  STATION 1  MO GAY 1  O9 28  TER  TRANS. QIR.  S 23  S .4.  3160 31600 3168	27   27   27   27   27   27   27   27	758 758 1969 2 SARI METI (METI	OOO5	155  RIGINATO  STATI NUA  055 R TEMP.  277 VOLUME LY-x107	0477	OEPTH 13  OEPTH 13  OA 30  OA 50  OEPTH 14  14  14  14  14  14  14  14  14	MAX DEPTHOOF OF OBSERV	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	300
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	CARD TYPE  STD OBS STD OBS STD OBS STD OBS STD	0500  ONGITUDE 1/1/10  OEPTH (m)  O000  O010  O010  O020  O020  O030	0 MAR 300 10° 2600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	015  SDEN ARE  1. 65  WA COLOR DT  148 152 155 155	34330  STATION 1 (GMT)  MO CAY   (GMT)  O 9 28   (TMT)  TRANS OIR   (MT)  S 23   (MT)  S 160   (MT)  3160   (MT)  3168   (MT)  3168   (MT)  3175   (MT)  3237	27 TIME  HR.1/105  105  SVENO SICC  25  25  25  26  26  26  26  26  26  26	758 758 1969 1969 8 ARRIVER (MET) 64 4 23 544 4 550 556 556 566 566	OOO5  CRUISE NO.  WE 2  OF OF OR OF OR OF OOO 25  OO 24	155  STAINUA 055  R TEMP. L8 81 44 0  VOLUME L7 - 110 7 525 892	0477  OR'S  TON AGER  TO VIS T	OEPTH 13  OEPTH 13  OA30  OA30  OA30  OA40  OA50   MAX DEPTH OF OF OF OF OF OTHER OF OTHER OF OTHER OF OTHER OT	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	\$0.0	
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	CARD TYPE  STC OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD OBS STD	0500  ONGITUDE (1) (1) (1) (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	0 MARK SOUL 10° 2600	SDEN NARE 1. 65 WAA COLOR CODE DT 148 148 152 155 150 121	34330  STATION TI  MO CAY P  09 28  TER  TANKS ORC  S 23  5 ./.  3160 3168 31680 3175 31750 32370 3237 32370 3265	SIC   SIC	758 YEAR 1969 D MARCH (Mb) D SARRA-T 1064 4 23 550 556 6556 606 606 606 606 60	OOO5  CRUISE NO. AI SER OF RU TO ANOMA  OO 25  OO 24	155 STAIN NUM NUM NUM NUM NUM NUM NUM NUM NUM NUM	0477  DR'S  TION  ABER  VIS  TO N  T	OEFTH   OEFT	MAX DEPTH OF OF OSSERVI	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	\$ 0.00
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	CARD TYPE  CARD TYPE  STC OBS STC OBS STC OBS STC OBS	0500  ONGITUDE 1/10  1/10  OEPTH (m)  OO000  OO10  OO10  OO20  OO20  OO30  OO50  OO50	-0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -	SDEN NARE 1. 65 WAR COLORD DT 7 C 148 148 152 155 150 150 150 150 121 121	34330  STATION 7: [GM7]  MO   CAY    99   28    18A   16A    3160   3168   31680   3175   31750   3237   3237   3265	27 TIME  HR.1/10 10 5  STORY	758 758 758 758 758 758 758 758 758 758	0005    CRUISE   NO.   WE2   1   1   -03   1   1   1   1   1   1   1   1   1	155  STAIN DA   055  R TEMP.   144	04777 C VITE COLUMN 102 C VITE C VITE COLUMN 102 C VITE	7 144 144 144 144 144 144 144 144 144 144	MAX DEFTI OF SAMPLE OF SAM	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	**CC
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	CARD TYPE  CARD OBS STD OBS	OSOO OSO OSO OSO OSO OSO OSO OSO OSO OS	0 MAR 30U 10° 2600	015  SOEN   1-1	34330  STATION T  OP 28  TER  TANK OR OAT    OP 28  S :  3160 31680 3168 31680 31750 3227 32370 3265 32250 3298 3298	27 TIME  HR.1/105  STORE TO ST	758 YEAR 1969 D MARIA Mahamata	0005    CRUISE	155 STATE OF THE PROPERTY OF	04777 ON STATE OF THE PROPERTY	7 144 14 14 14 14 14 14 14 16 17 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	MAXX DEPTH OF SYMPA SYMP	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	SCC
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	CARD TYPE	0500  ONGITUGE 1/10  OEPTH (m)  OCO0  OOOO  OOOO  OOOO  OOOO  OOOO  OOOO  OOOO	0 MAR SOU	SOEN NARE 11. 65 WA COLOR CODE DT 148 148 152 155 150 150 121 102	34330  STATION 1 IGM1  MO   CAY      99   28    TER      16m1   OIR    5   23    5 ° %.  3160   3168   3168   3175   3175   32370   3237   32370   3265   3265   3298	2.5 SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN	758 YEAR 1969 D MARCH (Mobile Mobile Mobi	0005    CRUISE   NO.   WE2   1   1   -03   1   1   1   1   1   1   1   1   1	155 STATE OF THE PROPERTY OF	04777 C VITE COLUMN 102 C VITE C VITE COLUMN 102 C VITE	7 144 144 164 164 164 164 164 165 166 166 167 167 167 167 167 167 167 167	MAX DEPTH OF SYMPL SEPTH OF SYMPL SEPTH OF SYMPL SEPTH OF SYMPL SEPTH OF SE	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	5000
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	CARD IVIE	OSOO OSO OSO OSO OSO OSO OSO OSO OSO OS	0 MARR 500U 10° T T T T T T T T T T T T T T T T T T T	015  SDEN   1-1  65   WA COLORS   1-1  148   1-52   1-55   1-50   1-21   1-21   1-21   1-22   1-02	34330  STATION 1: MO GAY   09   28   TER   14AN1: GIR. S   23   3160   3168   31680   3175   3175   3237   3237   3265   3265   32980   3330   3330   3330   3330   3330   3330   3330   3330	21 105 WING SIGN SIGN SIGN SIGN SIGN SIGN SIGN S	758 758 1969 D MARIA Mahamata M	0005    CRUISE	1555 STATE OF THE PROPERTY OF	04777 ON STATE OF THE PROPERTY	7 144 144 144 144 144 144 144 144 144 14	OBSERVING 1 377 377 377 377 377 379 391 412 412 430 444 4463	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	**************************************
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	OBS  CARD 1/10  CARD 1/10  STC OBS STC	OSOO OSO OSO OSO OSO OSO OSO OSO OSO OS	0 MARK SORU 10° 10° 10° 10° 10° 10° 10° 10° 10° 10°	015  SDEN   1.   65   WA   COLOR   DT   T   C   CORP   C   CORP   DT   T   C   C   C   C   C   C   C   C	34330    STATION 1   GEMT    MO   GAY       O9   28     TER       TERNS       OIR       S   23     S '%.   3160   3168     3168   3175     3175   32370     3237   32370     3298     3298     3330     3330     3330	27 TIME  INC. 17/10 105  SICC. 25  25  25  26  26  26  26  26  26  26	758 758 YEAR 1969 D Mills (mb)	0005    CRUISE   NO.	155  RIGINATO  STAT NUM  0.55  RY EN THE PROPERTY WILLIAM TO THE PROPERTY WILL	04777  TOON ABER  TO VITE CONTINUE OF THE CONT	7 144 14 14 14 14 14 14 14 14 16 16 17 18 17 18 18 18 18 18 18 18 18 18 18 18 18 18	MAX DEPTH OSSERV  SPECIAL STATE OSSERV  377 377 377 377 377 377 379 379 379 37	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	***************************************
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	OBS  CARD 1/10  L/10  STC OBS STC OBS STC OBS STC OBS STC OBS STC OBS STC OBS STC OBS STC OBS STC OBS STC OBS STC OBS STC OBS	OSOO OSO OSO OSO OSO OSO OSO OSO OSO OS	0 MARR 5000 10° 7 7 7 2600 10° 10° 10° 10° 10° 10° 10° 10° 10° 1	015    SOEN	34330  STATION 1  MO   OAY    O9   28    TER    TRAINS   OIR    S   23    S * '  3160   31680   3168   3175   3175   3237   3237   3265   3265   3265   3298   3330   3355   3352   3355   3352   33620	2.5 MIME    SICE	758 758 1969 D MARKA-1 1969 BARKA-1 Mobile (Mobile (Mobi	0005    CRUISE   NO.	155 STAINUN 055 STAINUN 055 STAINUN 055 814 - 0 VOLUME 5525 892 338 572 480 992 1570 1736 131	04777 CONTROL OF THE	7 144 144 144 144 144 144 144 144 144 14	OBSERVA SAMELY SAME SAME SAME SAME SAME SAME SAME SAME	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	**************************************
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	OBS  CARD 1/10  L/10  STD OBS	OSOO OSO OSO OSO OSO OSO OSO OSO OSO OS	-00 -00 -00 -00 -00 -00 -00 -00 -00 -00	015    SDEN   ARE   1	34330    STATION 1   GMT   GMT     MO   GAY   GMT     O9   28     TER           S   23     S '-4.     3160   31680     31680   3175     3175   32370     3298   32980     33300   33355     3355   3355     3362   3391     33910	SIGN   SIGN	758 758 758 758 758 758 758 758 758 758	0005    CRUISE   No.	155 RIGINATO STAT NUM 0.55 R YEWF. 144 - 0 1525 1525 1892 1572 1480 1572 1480 1573	04777  O4777  O50875  O100N  ABER  COVERT CO	7 144 144 144 144 144 144 144 144 144 14	MAX DEFIT OSSER  OSSER  377 377 377 377 377 377 377 379 391 412 430 440 440 440 440 480	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	9000 1
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	OBS  CARD 1/10  STC OBS STC OB	OSOO OSO OSO OSO OSO OSO OSO OSO OSO OS	0 MARR 5000 10° 10° 2600 10° 10° 10° 10° 10° 10° 10° 10° 10° 1	015    SOEN   ARE   1	34330    STATION 1   IGM 1   I	21 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	758 758 1969 D Market Mark	0005    CRUISE   NO.	155 RIGINATO STAT NUM 0.55 R YEWF. 144 - 0 1525 1525 1892 1572 1480 1572 1480 1573	04777 CONTROL OF THE	7 14 14 14 14 14 14 14 14 14 14 14 14 14	OSSERVA SPANEL S	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	<u> </u>
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	OBS  CARD 1/10  L/10  STD OBS	0500  ONGITUGE   100   1	-00 -00 -00 -00 -00 -00 -00 -00 -00 -00	015    SDEN   ARE   1	34330    STATION 1   GMT   GMT     MO   GAY   GMT     O9   28     TER           S   23     S '-4.     3160   31600     31680   3175     3175   3237     3237   3237     3237   3237     3237   3237     3237   3237     3237   3237     3237   3237     3237   3237     3237   3237     3237   3237     3237   3237     3237   3237     3237   3237     3237   3237     3237   3237     3330   3330     3330   3330     3330   3330     3330   3330     3331   3330     3331   3330     3331   3331     3412   3412     3412     3412   3412	STOP   STOP	758 758 758 758 758 758 758 758 758 758	0005    CRUISE   No.	155  RIGINATO  STATA NUM  OFFI  F TEMP.  1525  REMP.  152	04777  O4777  O50875  O100N  ABER  COVERT CO	7 144 144 144 144 144 144 144 144 144 14	MAX DEFIT OSSERV  SPECIAL SOCIETY  377 377 377 377 377 377 377 377 377 3	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	N C C
CTRY IO.	WE  MESSENGR TIME HR 1/10	7637	OBS   DE   1/10	OSOO OSO OSO OSO OSO OSO OSO OSO OSO OS	0 MARR 3000 10° 10° 2600 10° 10° 10° 10° 10° 10° 10° 10° 10° 1	015    STORN   1	34330  STATION 1: MO CAY   09 28   TER   14AN 1   S 23  S : 1. 3160 31680 3168 31683 31683 3175 31750 3227 3227 3227 3227 3227 3227 3227 322	SIGN   SIGN	758 758 758 758 758 758 758 758 758 758	0005    O005   O	1555  SIGNATO  STATE  S	0477  OH TO THE PROPERTY OF TH	7 144 14 14 14 14 14 14 14 14 16 16 17 18 17 18 18 18 18 18 18 18 18 18 18 18 18 18	OBSERVA SPRINGER SPRI	S OIR.	ERVATIONS HIGH PER SE	THER CODE	CODES		5104-5	OO55	SUC.

REFERENCE H	SHIP	LATITUGE	Lo	NGITUDE	MAR.		STAT	ION T		YEAR	CRUIS		NATOR'		DEPT	"   "	MAX, DEPTH OF	OB	W.A BSERV	VE A TION	s	WEA- THER	CLOUD			NODO	N
	CODE	* 1/	10	1/10	I 10°	110	MO D	YAG	NR,1/10		NO		NUMB		80110	S WC	S'MPL'S	DIR	HGI	PER	SEA	CODE	TYPE AM	7		NUMBI	ER .
3181	60 WE	76120N	1 07	4360W	260	64	09 2	28	145	1969	WE	2 05	6		027							02	7 7	1	- 1	005	6
1 3101	001 #1	1 101201	, , , , ,		,	WA		,	WINO	BAR	0-	AIR TE	MP. °C		NO.	.	CREC	CIAL	7								
						COLOR	TRANS.	DIR.	SPEE OR FOR	D MET	ER	DRY	BUL	В	DEPTI	HS 0		A TIONS	5								
						DT	S	00	500	24	4	022	-03	1	11												
	MESSEN TIME	or NO.	CARD TYPE	DEPTH (m	1 7	°c	S	•/	210	SMA-T		MALY-X		₹ △ 0 DYN. A x 10 <sup>3</sup>		ELOC		02 ml/		PO4~P		TAL-P g - al/l	NO2-N µg - at/(	NO <sub>3</sub> -N μg - α1/1	\$1 O4-		H C
			STD	0000		088	325			519	00	1837	8	0000		44								Į		1	
	14	5 (	BS	0000		088 102	325			519 525	00	1779	2	0018		44											
		,	STD	0010		102	326			525	00	7112	- 4	0010		44											
		,	STD	0020		109	326			527	00	1761	2	0036		44	_										
			BS	0020		109	326			527					1	44	13										
		·	STD	0030		105	326	8	20	530	00	1731	0	0053	3 1	44	17										
		C	BS	0030	-0	105	326	80	26	530						44											
			STD	0050		097	331			565	00	1395	1	0085	_	44											
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		(	DBS	0250	0	043	340	060	2	735					1	45	41										

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REFERENCE SHIP	LATITU	05 101	GITUDE FEE	SOUARE	STATION TIN	YEAR	ORIGINATO		DEPTH DEPTH	OBSERVATIONS		CLOUD		DEC
CODE NO. CODE		1/10		0° 1°	MO DAY HR		NO. NUM		BOTTOM S'MPL'S		COOF	TYPE AMT		MBER
319160 WE	7617	-		-	1. 1.				0420	0.2 1101762 30	02	6 8		057
318160  WE	7617	UN   U7	4020W 2	60 64 WA		66   1969	AIR TEMP.				1 02 1	0   0	1 0	057
				COLOR	I	SPEED MET	0-	VIS.	NO. SPEC					
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MESSENGE					<del>' ' ' '</del>			₹ Δ 0	1					
TIME	CAST	CARD	DEPTN (m)	T ℃	s */	SIGMA-T	SPECIFIC VOLUME	DYN, M.	VELOCITY	O2 m1/1 PO4-P		NO2-N NO3		PH C
HR 1/10	-							x 10 <sup>3</sup>		7.		7 301 991	0.71 PE 0.71	
	1			01/5	3250	2636	0018608	0000	14391			1		1
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166	•	STO		-0105	3277	2637	0016633	0018	14415					
		085		-0105	32770	2637	0010033	0010	14415					
		STD		-0093	3283	2642	0016203	0034	14423					
		085		-0093	32830	2642	0010203		14423					
		STD		-0089	3311	2664	0014065	0049	14430					
		OBS	0030	-0089	33110	2664			14430					
		STD		-0090	3332	2681	0012443	0076	14436					
		OBS		-0090	33320	2681			14436					
		STD		-0101	3347	2694	0011244	0105	14437					
		OBS		-0101	33470	2694		0100	14437					
		STD		-0088	3360	2704	0010283	0132	14449					
		OBS STD		÷0088 -0076	33600 3372	2704 2713	0009402	0157	14449 14461					
		OBS		-0076	33720	2713	0009402	0177	14461					
		STD		-0045	3383	2720	0008685	0179	14481					
		OBS		-0045	33830	2720			14481					
		STD	0200	0014	3405	2735	0007295	0219	14519					
		OBS	0200	0014	34050	2735			14519					
		STD		-0009	3414	2744	0006480	0254	14518					
		OBS		-0009	34140	2744			14518					
		STD	0300	0016	3425	2751	0005779	0284						
		OBS	0300	0016	34250	2751	0005050	0330	14540					
		STD		-0025	3432	2759	0005003	0338	14538					
		OBS	0400	-0025	34320	2759			14538					

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STD 0030 -0075 3341 2688 0011816 0047 14441  OBS 0030 -0075 33410 2688 14441  STD 0050 -0069 3347 2692 0011371 0070 14448  OBS 0050 -0069 33470 2692 14448  STD 0075 -0114 3362 2706 0010052 0097 14433  OBS 0075 -0114 33620 2706 14433  STD 0100 -0035 3381 2718 0008897 0121 14477  OBS 0100 -0035 33810 2718 14477  STD 0125 0000 3382 2718 008981 0143 14497  OBS 0125 0000 3382 2718 008981 0143 14497  OBS 0150 0002 3395 2728 0007998 0164 14504  OBS 0150 0002 33950 2728 14504  STD 0200 -0010 3406 2737 0007091 0202 14508  OBS 0200 -0010 34060 2737 14508  STD 0250 -0008 3416 2745 0006333 0235 14519  OBS 0300 0007 3424 2751 0005334 0321 14556  OBS 0300 0007 34240 2751 14535  STD 0400 -0020 3428 2756 0005334 0321 14540													00	481	8	0034	4													
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STD 0150 0002 3395 2728 0007998 0164 14504 0BS 0150 0002 33950 2728 14504 STD 0200 -0010 3406 2737 0007091 0202 14508 0BS 0200 -0010 34060 2737 14508 STD 0250 -0008 3416 2745 0006333 0235 14519 0BS 0250 -0008 34160 2745 14519 STD 0300 0007 34244 2751 0005803 0266 14535 0BS 0300 0007 34240 2751 14535 STD 0400 -0020 3428 2756 0005334 0321 14540						_				-			000	898	1	0143	3	144	97											
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OBS 0300 0007 34240 2751 14535 STD 0400 -0020 3428 2756 0005334 0321 14540													000	580	3	0266	5													
STD 0400 -0020 3428 2756 0005334 0321 14540						-			-				000	- 00.	-		-	-												
													000	5334	4	0321	1													
OBS 0400 -0020 34280 2756 14540					OBS	0400	-00	20	342	80	27	56																		
STD 0500 0022 3435 2759 0005049 0373 14577													000	5049	9	0373	3													
OBS 0500 0022 34350 2 <b>7</b> 59 14577					OBS	0500	00	122	343	50	27	59						145	77											

REFERENCE	SNIP				E MAR	SDEN	STATION TI		VFAB		RIGIHA		$\Box$	DEPTH	MAX, DEPTN	0.0	WAV		WEATHER		LOUD			ODC	
CODE NO.	CDDE	LATITU	1/10	LDNGITUDE '1/10	15 7 L	112	MO OAY H		YEAR	CRUISE ND.		TATION		TO BOTTOM	S'MPL'S			PER SE	CODE	: L	PE AMT			UMBER	
-	WE	7625	-	072470W	260	1 -			969	WE2	059			0530	15		1	76.7	01	_	5 7			0059	
318160	HE I	1625	וואט	012410W	1 1200	WA		VIND			IR TEM			NO.	1	1	1 '	- 1	1 01	1 '	,	ı	- 1		ı
						COLOR		SPEEO	METE	)- <del> </del>	RY	WET	CODE	OBS.	SPEC OBSERV										
						CODE	(m)	FORCE	(mbs		I LE	BULE		DEPTHS											
						DT	\$ 00	\$00	260	) -o:	28	-044	7	14											
	MESSENGE TIME HR 1/10	CAST ND.	CARD	DEPTN	(m) 1	2 1	s */	SIGM	А-Т	SPECIFIC		ME S	∆ D YN. M. X 10 <sup>3</sup>	SOI VELO	DCITY	02 ml/		04-P - 01/I	TOTAL-P		) <sub>2</sub> =N - ot/I	NO3-N	SI D4-Si µg - qt/I	рН	s C C
	HR WID	+-					1	1				_		_			-			+-					+
	l	1 1	ST	000	n -0	080	3302	265	i6 1	0014	¥801	1 0	000	114	428		1	ı		1	ı				1 '
	189	,	OBS	000		080	33020	265		001					428										
			ST	D 001	0 -0	880	3302	265	7	0014	4769	9 0	015	14	426										
			OBS	001	D -0	880	33020	265							426										
			ST			087	3305	265		0014	+536	5 0	029		429										
			OBS	002		087	33050	265				- ^	o		429										
			STI			085	3310	266		0014	1100	, 0	044		432 432										
			08S	003 005		085	33100 3346	266 269		001	1364	4 0	069		437										
			OBS	005		092	33460	269		001	- 00	•	00,		437										
			ST			088	3366	270		0000	9836	5 0	096		446										
			OBS	007	5 -0	880	33660	270	8					14	446										
			ST	D 010	0 -0	062	3377	271	6	0009	9086	5 0	119		464										
			OBS	010		062	33770	271							464										
			ST			030	3386	272		0001	3531	1 0	141		484										
			OBS	012		030	33860	272					1.0		484										
			OBS	015 015		037	3403 34030	273		000	1516	в о	162		521 521										
			ST			067	3415	274		0000	5845	5 0	198		545										
			085			067	34150	274		0000	2042	, ,	-,0		545										
			ST			053	3420	274		0000	5381	1 0	231		547										
			OBS			053	34200	274				_			547										
			ST			045	3430	275		000	5575	5 0	261	14	553										
			OBS			045	34300	275							553										
			ST			0000	3433	275		000	507]	1 0	314		550										
			085			0000	34330	275				_			550										
			ST			066	3444	276		0004	4661	7 0	363		598										
			OBS	050	0 (	0066	34440	276	4					14	598										

	SOEN STATION TIME	ORIGINATOR'S	TO DEPTH OSSERVATION	WEA- CLOUD NOOC STATION
CODE NO. CODE LATITUDE LONGITUDE SOL	1º MO DAY HR.1/10	CRUISE STATION	BOTTOM S'MPL'S DIR HGT PER	CODE
1710 1710 10				
318160  WE   76290N   072070W     260	62 09 28 205 1969	WE2 060	0370	02 6 6 17   0060
	SPEED MARY	)* VIS.	NO. SPECIAL OBSERVATIONS	
	CODE (m) DIR. OR (mbs		DEPTHS OBSERVATIONS	
	OT S 00 S00 26	5 -022 -028 7	12	
MESSENGR CAST CARD DEPTH (m) T	'C S '4. SIGMA-T	SPECIFIC VOLUME SA O	A.   02 ml/l	
HR 1/10 T NO. 17PE		X 103	VELOCITY yg - ot/	1
	064 3300 2654	0015009 0000		
	064 33000 2654	0014523 0015	14436 5 14435	
	070 3306 2659 070 33060 2659	0014523 0015	14435	
	071 3307 2660	0014438 0029		
	071 33070 2660	00130 002.	14437	
	073 3309 2662	0014273 0044		
	073 33090 2662		14438	
	086 3345 2691	0011461 0069	14440	
08S 0050 -0	086 33450 2691		14440	
STO 0075 -0	050 3355 2698	0010825 0097		
	050 33550 2698		14462	
	020 3374 2712	0009499 0123		
	020 33740 2712		14483	
	043 3386 2719	0008905 0146		
	043 33860 2719	0000101 011	14517	
	040 3392 2724	0008431 0167	7 14521 14521	
	040 33920 2724 115 3407 2731	0007762 0208		
	115 34070 2731	0007702 0200	14565	
	140 3420 2740	0006964 0245		
	140 34200 2740	1100,0.	14586	
	138 3434 2751	0005905 0277		
	138 34340 2751		14596	

C1RY CODE	RENCE ID. NO.	SHIP	LATITU	OE 1/10	LONGITUDE	SOr SOr	SOEN	STATION (GM	T3	YEAR	CRUISE NO.	S	ATOR'S		DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	1	WAVI SERVAT	IONS	WEA- THER COOE	CODES		5	NODC FATION UMBER	
1	8160	WE	7633		71310W	260	_	MO DAY 09 28	217	1969	WE2	06	1	_	0440	J	L	10,1	CK St	02	6 7	1		0061	
							$\overline{}$		FOR	E (mb	ren l	ORY ULB	WET BULB	VIS.	NO. OBS. DEPTHS	SPE( OBSERV	ATIONS								
							DT	S 0	0 500	26	5 -0	22	-028	7	13	<u> </u>					,	,			
		MESSENGR TIME HR 1/10	CAST NO.	CARD TYPE	OEPTH (	m1 1	2" 1	s °4.	. 510	SMA-T		VOLU:	07 0	E △ D 2YN. M. x 10 <sup>3</sup>		DCITY	02 ml/l		4-P	†ΟΤΑ L—P μg + οξ/Ι		NO3~N yg - at/l	SI O4-Si µg - at/I	рН	SCC
													Π.					T							$\prod$
		217	,	STI 085	0000		040	3290 3290		545 545	001	5864	4 0	000		445 445									
		211		ST			050	3300		554	001	5056	6 0	015		444									
				OBS	0010		050	3300		554						444									
				STO			055	3303		556	001	480	3 0	030		443 443									
				OBS	0020		055	3303		656 660	001	448	5 0	045		445									
				085	0030		057	3307		560			-			445									
				STO	0050		070	3318	26	669	001	358	6 0	073	14	444									
				085	0050		070	3318		669						444									
				STO			035	3345		589	001	165	2 0	105		468									
				OBS	0079		035	3345		589 702	001	042	8 0	132		468 490									
				085	0100		001	3363		702	001	042	0 0	1232		490									
				ST			011	3371		708	000	987	5 0	158		501									
				OBS	012		011	3371		708						501									
				ST			042	3382		715	000	920	2 0	181		521									
				085 ST0	0150		100	3382		715 726	000	819.	2 0	225		521 558									
				085	0200		100	3400		726	000	019	2 0	1625		558									
				STI			144	3412		733	000	759	8 0	264		587									
				OBS	0250		144	3412		733					14	587									
				ST			150	3420	_	739	000	705	1 0	301		599									
				OBS	0300		150	3420		739				2.7		599									
				STO			154	3434		750 750	000	605	5 0	1367		619 619									
				OBS	0400	) (	154	3434	0 2	750					14	019									

REFERENCE			MARSDEN SQUARE	STATION T		ORIGINATO	R*S	DEPTH DEPT		WAVE ERVATIONS	WEA-	CLOUD			NDDC
CODE ND. CODE	1/10 LC			MO T DAY TH		CRUISE STAT		BOTTOM S'MPL	0 83	HGT PER SEA	THER	TYPE AM			UMBER
									. 3 DIK	BGI PER SEA	_	1	<u>'</u>		2012
318160  WE   763	888N   01	70523W   2	4					0210			73	X   9	1	1	0062
			WA		SPEED BAR		VIS.		ECIAL						
			CDLOR	TRANS. DIR.	OR AET		/ET CDD	DEPTHS DESER	VATIONS						
			DT	5 00	500 27	2 -022 -0	28 7	10							
		1		-	1			<del></del>		1					
MESSENGE CAS		DEPTH (m)	T ℃	5 %.	SIGMA-T	ANOMALY-X107	₹ △ D	VELDCITY	D <sub>2</sub> ml/l	PO4-P	101AL-P pg = 01/1	ND2-N vg - 01/1	NO3-N	51 O <sub>4</sub> - \$i µg = ot/l	
HR 1/10		1					x 10 <sup>3</sup>	71100117		pg - 0//1	pg - 0.71	Dy - 001	μg = a1/1	pg - 0//	
					1		l								١ .
	ST0		-0010	3209	2579	0022182	0000								
230	OBS		-0010	32090	2579	0001/07	0022	14448							
	STO OBS		-0011 -0011	3216 32160	2584 2584	0021637	0022	14450							
	ST0		-0006	3225	2591	0020965	0043								
	OBS		-0006	32250	2591	0020707	0043	14455							
	STD		-0004	3260	2620	0018295	0063								
	OBS		-0004	32600	2620			14463							
	STD		-0015	3280	2636	0016711	0098	14464							
	OBS		-0015	32800	2636			14464							
	STD	0075	-0032	3308	2659	0014490	0137	14464							
	OBS	0075	-0032	33080	2659			14464							
	STD		-0028	3326	2674	0013124	0171	_							
	OBS		-0028	33260	2674			14472							
	STD		-0023	3347	2690	0011537	0202	_							
	OBS		-0023	33470	2690			14482							
	STD	0150	0005	3365	2704	0010296	0229	_							
	OBS	0150	0005	33650	2704	0000043	0270	14501							
	STD	0200	0054	3385	2717	0009042	0278								
	OBS	0200	0054	33850	2717			14535							

REFERENCE CTRY IO. CDDE ND.	SHIP	LATITU	DE LO	MGITUDE HOCK	MARSDEN SQUARE	STATION T	YEAR	ORIGINATO CRUISE STAT	ION	DEPTH DEPTH DEPTH DF S'MPL	M OBSE	WAVE RVATIONS HGT PER SEA	WEA- THER CODE	CLDUD CODES	i	S1	ATION UMBER
318160	WE	7620	2N 07	0100W	260 60	09 30	158 1969	WE2 063		0200			71	X 9			0063
			,		WA	TER	VIND BAR	AIR TEMP.		NO. CO	ECIAL		Ť			Ť	
					CDLDR		SPEED MET	ER DRY W	VIS.	OBS. DESER	VATIONS						
					CODE	lm)	FDRCE Imb										
					DT	5 20	509 23	3 -011 -0	17 4	10							
	MESSENG TIME HR 1/10	of ND.	CARD TYPE	DEPTH (m)	7 ℃	s */	SIGMA-T	SPECIFIC VOLUME ANOMALY-X107	₹ △ D DYN. M x 10 <sup>3</sup>	SDUND	O2 ml/l	PO <sub>4</sub> -P µg = a1/1	TOTAL-P	NO2-N yg - ai/l	NO3-N ug - al/l	\$1 D4-51 pg - al/1	pH S
	1	' '	STD	0000	-0020	3175	2552	0024745	0000	14439	'			'			
	15	8	OBS	0000	-0020	31750	2552			14439							
			ST0	0010	-0028	3180	2556	0024326	0025								
			OBS	0010	-0028	31800	2556			14437							
			STD	0020	-0027	3188	2562	0023712	0049								
			OBS	0020	-0027	31880	2562	00011/0	0071	14440							
			STD	0030	-0016	3222	2589	0021149	0071	14452							
			OBS	0030	-0016 -0008	32220 3253	2589 2614	0018804	0111								
			STD	0050 0050	-0008	32530	2614	0018804	0111	14463							
			STO	0075	-0016	3303	2655	0014942	0153								
			OBS	0075	-0016	33030	2655			14471							
			ST0	0100	-0016	3327	2674	0013102	0188	14478							
			OBS	0100	-0016	33270	2674			14478							
			STD	0125	-0004	3348	2690	0011551	0219	14491							
			OBS	0125	-0004	33480	2690			14491							
			STD	0150	-0002	3356	2697	0010946	0247								
			OBS	0150	-0002	33560	2697			14497							
			ST0	0200	0007	3364	2703	0010373	0300								
			OBS	0200	0007	33640	2703			14510							

************									1				MAR								
CTRY ID.	CODE	LATITU	1	NGITUDE NG	MARSDEN SQUARE	STATION TI		YEAR	CRUISE	STATION NUMBER		DEPTH TO BOTTOM	DEPTH DF	DBSE	WAVE RVATIONS	TNER CODE	CODES		5	NODC TATION NUMBER	
318160	WE	7614	0N 07	0460W	260 60	09 30 1		969	WE2 06			0610	S'MPL'S	DIR. II	HGT PER SEA	02	X 9			0064	
					COLOR	1	IND	BARD	-	MP. C	VIS	NO. OBS.	SPECIAL			•		`			
					CDDE	TRANS. DIR.	FORCE	edm)	1 8018	9UL9	+-	DEPTNS	OESERVATIO	IN S							
	MESSENGE	T			TOT	S 14	S15	22:		-017	7 ^ p	15		Д,	I I						٦,
	MESSENGR TIME HR 1/10	ND.	TYPE	DEPTH (m)	7 10	s */	SIGM	A-T	ANOMALY-X	107 DY	ν 10 <sup>3</sup>	. VELC	DCITY D2	ml/I	PO4-P µg = 01/1	101AL-P pg - a1/1	ND2-N 29 - ot/l	NO3-N	S1 D 4—Si yg - at/		o c
			STD	0000	-0080	3295	265	.   .1	001533	7 0	000	144	427								$\prod$
	173	3	OBS	0000	-0080	32950	265	1				14	427								
			STD OBS	0010 0010	-0083 -0083	3297 32970	265 265		001516		015		428 42B								
			STD OBS	0020 0020	-0087 -0087	3300 33000	265 265		001492	0 0	030		428 428								
			STD	0030	-00B9 -0089	3305 33050	265	9	001452	4 00	045	144	430								
			OBS STD	0030 0050	-0075	3336	268		001219	0 00	072		430 444								
			OBS STD	0050 0075	-0075 -0040	33360 3355	268		001086	7 0:	101		444 467								
			OBS STD	0075 0100	-0040 -0002	33550 3363	269 270	8	001042		127	144	467 490								
			OBS	0100	-0002	33630	270	2				144	490								
			STD OBS	0125 0125	0028 0028	3374 33740	271 271		000973	6 0	152		509 509								
			STD OBS	0150 0150	0054 0054	3385 33850	271 271	7	000904	3 0	176		526 526								
			STD	0200	0102	3399	272	5	000828	1 0	219	145	558								
			OBS STD	0200 0250	0102 0151	33990 3417	272 273		000727	2 0	258		558 591								
			OBS STD	0250 0300	0151 0170	34170 3428	273		000660	0 0:	293		591 509								
			OBS STD	0300	0170 0031	34280 3431	274	4	000541		353	146	509 564								
			OBS	0400	0031	34310	275	5				145	564								
			STD OBS	050 <b>0</b> 0500	-0002 -0002	3433 34330	275 275		000504	9 04	405		566 566								
			STD OBS	0600 0600	0080 0080	3443 34430	276 276		000485	4 04	455		621 621								
						3 . , 3 0		_				- ' '									
REFERENCE									ORIGIN	A TO BIT			MAX.								
CTRY ID.	SHIP	LATITU		GITUDE E	MARSDEN	STATION THE		YE AR	CRUISE S	TATION	-	DEPTH TO BOTTOM	DEPTH OF	OBSER	VAVE RVATIONS	THER CODE	CODES		2	NODC TATION IUMBER	
318160	WE	7609	0N 07	1225W	260 61	09 30 1		969	WE2 06			0530	S'MPL'S O	it, H	IGT PER SEA	73	X 9			0065	
					COLDR		SPEED	BARO		WET	VIS.	NO.	SPECIAL	N.S							
					DT	(m)	FORCE S14	(mbs)	BULB	BUL0 -014	6	DEPTHS	003124741101	-							
1	MESSENGR	CAST	CARD					1	SPECIFIC VOLU	uı ₹	ΔD	sou	IND	_	PO <sub>4</sub> -P 1	OTAL-P	ND <sub>2</sub> -N	ND3~N	SI D4-Si		s
	MESSENGR TIME C HR 1/10	NO.	TYPE	DEPTH (m)	1 %	s *¼.	SIGM	A-T	ANOMALY-XI	A7 I DY	(N, M.	VELD		ml/l		µg - at/1	μg - at/1	μg - αt/l	pg - at/l	рН	c
	i		STD	0000	-0070	3290	264	6	001575	4 00	000	144	¥31	١		- 1	1	Į		l	[]
	187		OBS STD	0000	-0070 -0072	32900 3292	264 264	_	001558	a nr	16	144									
			OBS	0010	-0072	32920	264	8				144	32								
			STD OBS	0020 0020	-0074 -0074	3294 32940	265 265		001542	3 00	31	144									
			STD OBS	0030 0030	-0071 -0071	3330 33300	267 267		001267	3 00	045	144	441 441								
			STD	0050	~0089	3349	269	5	001114	5 00	069	144	39								
			OBS STD	0050 0075	-0089 -0090	33490 3365	269 270	8	000990	5 00	95	144									
			OBS STD	0075 0100	-0090 -0068	33650 3378	270 271		000898	5 0	119	144	445 461								
			OBS STD	0100 0125	-0068 -0023	33780 3389	271 272	7	000833		141	144	461								
			OBS	0125	-0023	33890	272	4				144	88								
			STD OBS	0150 0150	-0003 -0003	3397 33970	273 273	0	000782		161		502								
			STD OBS	0200	-0045 -0045	3405 34050	273 273	В	000699	4 0	198	144									
			STD	0250	-0032	3414	274	5	000636	1 0	231	145	50B								
			OBS STD	0250 0300	-0032 0040	34140 3425	274 275	0	000592	3 0	262	145									
								-					EFA								
			OBS	0300 0400	0040 -0013	34250 3430	275 275		000522	2 03	318	145									
			OBS STD OBS	0400 0400	-0013 -0013	3430 34300	275 2 <b>7</b> 5	7				149	544 544								
			OBS STD	0400	-0013	3430	275	7	000522		318 369	149 149	544 544								

	ERENCE	SHIP	LATITU		LONGITUDE	MAR	SDEN IARE		ION T	IME	WE		ORIGIN	ATOR"		DEPTH		PTH		WAVE		WEA	CLOUD			NODC	
CODE	ID, ND,	CODE	·	1/10	LONGITUDE 1/10	10*	-			IR.1/10	YEAR			STATID		BOTTO	ا اند	OF			RUNS R SEA	THER	TYPE AM	1		STATIOI NUMBE	
	8160	WE	7604		071550w	260	1		-		1969	+-	E2 06		-	0430		1723	-	HG1 PI	IN SEA	02	6 8	-	-	006	4
1 21	8100	= -	7004	ON I	071330	1200	MA			AIND	$\overline{}$	1	AIR TE			<del></del>	<u> </u>		٦ <sup>†</sup>	- 1	1	1 02	1010	I	- 1	000	o i
							COLOR			SPEED	MET		DRY	WET	VIS.	9 OB2	0.00	SPECIAL	216								
							CDDE	lm I	DIR	FORC			BULB	EUL		DEPTH	is oss	EKYAIID	M 3								
							DT	5	14	514	21	8	-003	-01	+ 6	13	7										
		MESSENGI		CAR	D	Τ.	to.	Τ.	- /	1		SPE	CIFIC VOLU	ME	₹ΔD		OUND			PO,	P.T	TOTAL-P	ND2-N	NO3-N	SI D4-		s
		TIME HR 1/10	of NO.	TYP		'	°C	1 ,	٠/	SIG	MA-T		NOMALY-X		X 10 <sup>3</sup>	^- L vie	rocin	y 02	mt/I	ия -		7\fa - gu	ug - al/l	μg - αt/l			4   6
		1710	-	-		+-		1-		+				+				+		$\vdash$	-		<del> </del>		1	+	H
		!	t	้รา	0000	-0	070	330	00	26	54	01	01498	a '	0000	1 1 4	4433	3		1	- 1		ı	ł	1	1	- 11
		198	3	OBS		-0	070	330	000	26	54	-				14	4433	3									
				51			080	330		26		00	01464	2	0015		4430										
				085	_		080	330		26	-					_	4430										
				51			086	330	-	26		00	01454	0 (	0029		4429										
				085 51	_		086 089	330		26 26		0.0	01391	, ,	0044	_	4429 4431										
				089			089	331		26		00	01391	۷ ۱	1044		4431										
				ST			089	335		26		0.0	01083	8 (	0068	_	4440										
				OBS			089	335		26			01003		, , , ,	_	4440	-									
				ST	D 0075	-0	087	336	55	27	08	00	00991	6	0094	14	4446	5									
				083	0075		087	336	550	27	08					14	4446	5									
				51			072	337		27		0.0	00912	2 +	118		4459										
				OBS			072	337		27							4459										
				ST			042	339		27		0.0	00786	7 (	139	_	4480										
				OBS			042	339		27		0.0	007//	2	1150		4480										
				ST OBS			030 030	340		27 27		01	00746	2 1	)159		4518 4518										
				ST			035	341		27		0.0	00688	1 4	194		4530										
				OBS			035	341		27		-	- 5000	• '	, ,	_	4530										
				ST			010	341		27		00	00624	7 (	227	_	4518										
				085	0250	-0	010	341	70	27	46					14	4518	3									
				ST			023	342		27		0.0	00571	4 (	257		4521										
				OBS			023	342		27							4521										
				ST			014	343	_	27		00	00506	5 (	311		4543										
				OBS	0400	-0	014	343	320	27	59					14	4543	3									

RENCE ID.	SHIP	LATITU	DE LO	ONGITUDE	DRIFT	MARS			ION TIN		rear	CRUISE	_	ATOR'S	_	DEPTH TO	MAX. DEPTH OF	OE	WAVI SERVAT		WEA		OUD			NODC	
NO.	CODE	•	1/10	1/10	=  -	10*	111	моТ	DAY HR	.1/10		NO.		NUMBER	- 1	BOTTOM	S'MPL'S	Off.	HGT P	ER SEA	COD	TYPE	A M	7	- 1	NUMBER	١.
8160	WE	7558	ON O	72310W		260	52	09	30 2	17 1	969	WE2	06	7		340			П		02	6	8			006	7
						٦	WAT			IND				MP. °C	T'i	NO.	ľ		ľ '	'	, ,,	, -		'	'		1
						ı	COLOR	TRANS	DIR.	SPEED	8ARC METE		DRY	WET	ZIV 3000	OES.	SPEC										
						L	CODE	Lm I	DIK.	OR FORCE	(mbs	1   0	ULB	BOFB		DEPTHS											
							DΤ	S	14	S14	218	3 ├0	03	-014	6	12											
	MESSENGR TIME O	CAST ND.	CARD TYPE	DEPTH	m)	τ	'n	2	٠/	SIGM	A-T	SPECIFIC	VOLU	07 D1	△ D N. M. 10 <sup>3</sup>		OCITY	02 ml/		(-P o1/I	101AL-1			NO3-N yg - al/l	51 D4-5		
														$\neg$													
	'		STD	0000	ֹ נ	-00	070	32	в0	263	8 '	001	652	0 '01	00	14	430 '		'	'				ı	,		
	217		OBS	0000	)	-00	70	32	300	263	8					14	430										
			STD	0010	)	-00	165	32	90	264	6	001	576	7 00	116	14	435										
			OBS	001	)	-00	)65	32	900	264	6					14	435										
			STD	0020	)	-00	880	33	02	265	7	001	476	3 00	31	14	428										
			085	002		-00	880		020	265							428										
			STD	003		-00		33		267		001	302	3 00	145		437										
			OBS	003		-00	_		250	267							437										
			STD	005		-00		33		270		001	050	4 00	69		436										
			085	005		-00			570	270							436										
			STD	007		-00		33		271		000	950	5 00	194	-	443										
			OBS STD	007		-00			700	271			0.5.0		1.		443										
			0BS	010		-00		33		272		000	852	5 0.	16	-	470										
			STD	012		-00		33	350	272		000	824	1 0	37		470 493										
			085	012		-00			910	272		000	024	1 0.	. 5 1		493										
			STD	015			030	34		273		000	738	7 0.	57		518										
			OBS	015			030		050	273		000	, , ,	. 0.	1		518										
			STD	020			048	34		274		000	672	9 0	92		536										
			085	020			048		150	274		500	012	, 0.	,,,		536										
			STD	025			033	34		275		000	595	7 02	24		539										
			OBS	025			033		240	275							539										
			STD	030			008	34		275		000	565	7 02	53		536										
			085	030			008		260	275					-		536										

REFERENCE	SHIP	LATITL	IDE	LONGITU	26	DRUFT	MAR			IDN I		YEAR	_	DRIGINA			DEPTH	DEPTH			WAV			EA-	CLOUD			NODC	1
COOE ND.	CODE	·	1/10		1/10	2 2	10°				HR_1/10	ILAK	CRUISE NO.		ATION		BOTTON	D.F.			RVA 1	ER SE		IER DE	TYPE AM			STATION	
31816	O WE	7553		07305		1	260	1		_		1969	$\vdash$				0340	+	-	JIK.	NGI F	ER ( 36)	_			-			
, 51010	0  11	, ,,,,,	,014 (	0,505	~ H	1 1	200	WA		_	WIND		_	AIR TEM		$\vdash$	$\overline{}$	<u> </u>		ار ا	- 1	- 1	1	2	6 8	1	١	0068	1
								CDLOR		DIR,	SPEED	METE	R	DRY	WET	VIS,	ND.	Cocces	ECIAL										
								CDDE	(m)	_	FORCE	(mbs	$\rightarrow$		8UL8		DEPTHS	001011	.,,,,,,										
								DΥ	S	14	520	20	4 -0	03 -	014	6	12												
	MESSENG TIME NR 1/1	W NO.	C AR TYP		HT	(m)	т	℃	S	٠/	SIGA	I-AA	SPECIFIC	ALY-X10	T DY	△ 0 N. M 10 <sup>3</sup>		UND OCITY	D <sub>2</sub>	m1/I	PD.		TOTAL 0 - QU		ND2~N μg - αl/l	NO <sub>3</sub> N νg - σt/l			\$ C C
									<del>                                     </del>						1		+-				-	-		$\dashv$			-	_	+H
		'	<sup>'</sup> 51	ס ' סי	000	0	-0	100	327	75	26:	35	001	6807	00	000	14	415			1	- 1		- 1	- 1		1	1	11
	22	9	OBS	0	000	0	-0	100	327	750	26:							415											
			51		010			103	327		26		001	6562	0.0	17	14	416											
			085		010		-0		327		26:							416											
			S1 089		020 020			100	329		264		001	5491	00	133		421											
			ST		020		-00		331		266		001	3862	0.0	047		421 444											
			085		030		-00		331		266		001	3002	0.0	, 4,		444											
			ST		050		-00		335		269		001	0922	00	72		440											
			085	0	050	)	-00	87	335	20	269	7					14	440											
			ST		75		-01	00	336	5	270	8	000	9869	0.0	98	14	440											
			085		775		-01		336		270							440											
			ST		100		-00		337		271		000	9079	01	122		454											
			OBS		100		-00		337		271		000	0070	0.1			454											
			085		125		-00	_	338	-	272		000	8379	0 1	44		484 484											
			ST		150			002	340		273		000	7617	0.1	64		484 505											
			085		150			002	340		273		000	.01,	0.1			505											
			ST		200			38	341		274		000	5822	02	00		531											
			OBS	0.	200	)	00	38	341	30	274							531											
			ST		250		00	)44	342	0	274	16	000	5326	02	33	14	543											
			OBS		250			)44	342		274							543											
			ST		300			07	342		275		000	5576	02	62		536											
			OBS	0:	300	J	00	07	342	70	275	3					149	536											

REFERENCE	SHIZ	LATITU	DE   101	NGITUDE E	MARS			ON TIV		EAR		RIGINAT				MAX. DEPTH		WAVE	DNS	WEA-	CLOUD			NDDC TATION
CODE ND.	CODE	*	1/10	1/10	10°			AY HE		L-CIN	CRUISE NO.		MBER		TTDAA	OF S'MPL*S		HGT PER		CODE	TYPE AM			UMBER
318160	WE	7548		3400W	260	1	-			969	WE2	069		0.3	350				1	02	X 9			0069
1 210100	#6	1940	014   07	3400#	1200	WAI			IND			IR TEMP		1	10.		<u></u>	! 1	1	1 02	1 112	'	1	00007
					Ì	CDLDR	TRANS.	DIR,	SPEED	METE			WET CO		201		ATIONS							
						CODE	(m)	_	FORCE	(mba	_	_	-	_										
						DΤ	S	22	520	200	0 0	00 ㅏ	006 6	1	12									
	MESSENGR TIME d	CAST	CARD	DEPTH (m)	T	ъ	s	٠/	SIGMA	T-1		VOLUMI	₹ ∆ DYN.	D	SOUN		O 2 ml/l	PO4		TOTA L-P	NO <sub>2</sub> -N	NO3-N	SI 04-Si	pН
	HR 1/10	NO.	TYPE								ANOM	ALY-X107	x 10	3	AFFOC	CITY		N8 - 0	01/1	yg • al/l	μg + at/I	ا/to - وبر	yg - al/1	· · ·
													1			_								l
	000		STD	0000		090	328		264		001	6071	000	-	1442									
	002		OBS STD	0000 0010		090 093	328		264		001	5672	001		1442									
			085	0010		093	329		264		001	,,,,	001		1442									
			STD	0020	_	085	329		264		001	5693	003		1442									
			OBS	0020	-00	085	329	00	264	7					1442									
			SID	0030		089	334		269	2	001	1384	004		1443									
			085	0030		089	334		269						1443									
			STD	0050		098	336		270		001	0042	006	7	1443									
			OBS	0050		098	336		270						1443									
			STD	0075		880	337		271		000	9530	009	1	1444									
			OBS	0075		880	337		271				011		1444									
			STD	0100		060	338		271		000	8789	011	4	1446									
			OBS STD	0100 0125		060 022	338		271		000	8112	013	5	1448									
			085	0125		022	339		272		000	0112	013	_	1448									
			STD	0150		040	340		273		000	7367	015	4	1452									
			085	0150		040	340		273		000	,,,,,,	0-5		1452									
			STD	0200		046	341		274		000	6793	019	0	1453									
			085	0200		046	341		274	_		,,	3-7		1453									
			STD	0250		028	342		274		000	6155	022		1453									
			085	0250		028	342		274						1453	36								
			STD	0300		010	342		275		000	5745	025	2	1453	37								
			085	0300	0	010	342	250	275	2					1453	37								

REFERENCE	SNIP				- =	MARSI		STATION				ORIGINA	ATOR'S		DEPTH	MAX		WAY	/E	WE.	A- C1	LOUG		Τ,	NODC	]
CORY IO.	COOE	LATITU			DRIFT	SOUA		IGM		YEAR	CRUISE		TATION		10	OEPTH	1 0	BSERVA	TIONS	THE	R C	2300		2.	NOTA	
140.	-		1/10	1/10		10°	11		HR,1/10		NO.		NUMBER	_	BOTTOM	S'MPL	'S DIR	HGT	PER SE	COL	ITP	EAMI		N	UMBÉR	
318160	WE	7536	ON	072540W		260]		10 01	018	1969	WE2	070	0		0480					02	2   X	9			0070	
						-	WAI	ER	WINO	- BAF	10-	AIR TEA	MP. °C	VIS.	NO.	SPI	ECIAL	1								
							COOE	TRANS. OII		, mc		DRY	WET	COD	OBS. OEPTHS		VATIONS	i								
						-	DΤ	5 22	520	-	$\longrightarrow$		-006	7	13			-								
							0 1	2  20	. 320	, 1,	0 0	00	000	1	13			1							,	
	MESSENGR	CAST	CAR		(m)	т	℃	s ./	510	MA-T		VOLUA		A 0		סאע	O <sub>2</sub> ml/	/  PC	04-P	TOTAL-	P NO	2-N	NO3-N	51 O4-Si	рН	S
	HR 1/10	1	1117					1			ANOM	ALY-X10		( 10 <sup>3</sup>	VELO	OCITY		hΒ	- 01/1	yg - 01/	u pg.	- oI/I	µg + a1/l	μg = at/l	pre	č
																-										$\Box$
			ST	D 0000	0	-00	193	3284	26	642	001	6138	8 0	000	14	420		1			'	,			'	( '
	018		085	0000		-00		32840		542					14	420										
			ST			-01		3287		645	001	5883	1 0	016		419										
			085			-01		32870		45						419										
			ST			-01		3328		78	001	2722	2 00	030		425										
			OBS			-01 -01		33280		578 594	001	1 2 2 .	2 0	2/2		425										
			085	0030		-01		33470		94	001	1222	2 01	042		423 423										
			ST	_		-01		3361		706	003	0104	/ <sub>4</sub> 0/	064		423										
			OBS	0050		-01		33610		706	001	510-	7 01	704		423										
			ST			-00		3370		712	000	9501	1 00	880		443										
			OBS	0079		-00		33700		712		,,,,,				443										
			ST	D 0100	)	-00	80	3375		715	000	916	7 0	111		455										
			085	0100	)	-00	80	33750	27	715					14	455										
			ST			-00	03	3394	27	727	000	8052	2 0	133	14	498										
			obs	0125		-00		33940		727						498										
			ST				74	3402		730	000	7871	1 0	153		538										
			OBS	0150		00		34020		730						538										
			ST			01		3421		740	000	6891	1 0	190		579										
			OBS	0200		01		34210		740				3 0 0		579										
			ST			01		3427		746	000	6378	5 04	223		584										
			OBS ST	0250 0300		01 -00		34270		746 754	000	5497	7 0	253		584 529										
			0BS	0300		-00		34270		754	000	149	7 04	- 73		529										
			ST			-00		3431		158	000	5141	1 03	306		543										
			085	0400		-00	_	34310		58	290		_			543										

REFERENCE	SHIP				MAR.	SOEN	STAT	ION T	IME			ORIGINA	TOR'S		OEPTH	MAX, DEPTN	T	WAV			EA-	Cronp			NOOC	
CTRY ID.	COOE	LATITU	1/10 I	LONGITUDE '1/10	ō ½	ARE	MOLE	GMTI		YEAR	CRUISE NO.		ATION		TO BOTTOM	0.6	1 00	SERVA			HER DE	COOES			NUMBE	
		75.0			10°	1,					_		,,,,,,,,,,,	$\dashv$	0/10	3 411 6	J OIL	101	- SE	$\overline{}$		X 9	-		007	1
318160	WE	7542	ONIO	72220W	260	52 WA		_	031	1969	<u> </u>	NIR TEM	P T		0410	1	L	1	- 1	1 0	2	1 119	1	- 1	007	T
						COLOR	1	OIR.	SPEED	METE	)• <del> </del>	DRY		VIS,	NO. OBS.		CIAL 'ATIONS									
						CODE	lm1	OIK.	FORCE	(mbs	i) 8	ULB	BULB		OEPTHS											
						DT	S	18	510	19	2 -0	11	022	7	13											
	MESSENG TIME HR 1/10		CARD TYPE	OEPTH (	im1 T	€	s	*/	SIGA	T-AA	SPECIFIC	VOLUM ALT-XIO	) DIN			UNO	O2 mi/		4-P - 01/I	1 ATO1		NO2~N µg + at/l	NO3-N yg - at/l	\$1 O4-		H C
	1710	1					+-						1					$\top$			$\dashv$				1	$\dashv$
1		1	I STD	0000	-0	095	329	15	265	51	001	5289	00	00	144	420		1	1		'			ı	'	1.
	03	1	085	0000		095	329		269							420										
			STD			096	329		265		001	5126	00	15		422										
			085	0010		096	329		26!				00			422										
			STD OBS	0020		096 096	330		269		001	4890	00	30		424 424										
			STO			100	333		268		001	2190	00	44		429										
			OBS	0030		100	333		268							429										
			STO			107	335		270		001	0547	00	66	14	432										
			OBS	0050		107	335		270							432										
			STO			094	336		270		000	9738	0.0	92		443										
			OBS	0079		094	336		270		000	01/5	0.1	16		443										
			OBS	0100		048	337		27: 27:		000	9145	01	10		470 470										
			STO			008	338		272		000	8484	01	37		494										
			085	0129		008	338		27		000			- '		494										
			STE	0150	0 0	049	339	8	272		000	8027	01	58	14	526										
			OBS	0150		049	339		272							526										
			STO			050	341		274		000	6665	01	95		537										
			085	0200		050	34]		274							537										
			ST(	D 0250 0250		031	34]		274		000	6325	02	27		537										
			STO			031	341		274	_	000	5710	02	E 7		537 534										
			OBS	030		004	342		27		000	5710	02	57		534										
			ST			007	342		27		000	5333	03	13		546										
			obs	040	0 -0	007	342	290	275					-		546										

														-		T										1
REFERENCE	SHIP				E M	ARSOEN	STATI	ON SMI	TIME	W a	_		ATOR'S		OEPTH	MA)			AVE		WEA-	CLOUG			NOOC	
CTRY IO.	COOE	LATTUC				BRAUC				YEAR	CRUISE NO.		NOIT AT		TO AOTTOB	A S'MPI			GT PER		COOR	TYPE AM			UMRER	
CODE HO.	1		1/10	1/10	= 10	. 1.	MO D	AY	HR 1/10		1	_				3 74.1	. 5 00	Z IH	GI PER	367		1			0073	
318160	WE	75480	O NC	71380W	26	0 51	10 0	1	044	1969					0410	Ц	$\perp$	_!	ı	1	70	X   7	1	I	0072	Į.
						WA	TER		WIND	BAR	o- ⊨	AIR TE	MP. °C	VIS	NO.	SP	ECIAL									
						COLO		OR.	SPEE	1 72		ULB	WET	COOL	OBS.	ORSER	OFFA	N S								
						-	+		FOR	-				1-	12	-		$\dashv$								
						DT	S	18	\$1	) 18	/ -0	11	-022	7	13		,	Щ,					1			$\overline{}$
	MESSENGR	CAST	CARD					.,	1		SPECIFIC		IME 3	E A O	sc	ONU	02 1		PO4-	-P	TOTAL-P	NO2-N	NO3-N	5104-5		S S
	TIME	약 NO. ]	TYPE	OEPTN (	m)	τ ℃	,	٠/	210	SMA-T	ANON	ALY-EI	197	2 10 <sup>3</sup>	. AEI	OCITY	02"	",	μg = 0	ot/1	≱g - e1/1	μg - σ1/l	µg - al/l	μg - σl/	1	
	HR 1/10	1					+-		+		<u> </u>				+-		T -	$\neg$		_						П
		1 1			<u> </u>	0062	329		١,	646	1001	578	2 0	000	14	435	l	1		1		1	ı	1	'	
			STD	0000		0062	329			646	001	,,,		,,,,,		435										
	044	+	OBS STD			0067	329			647	001	568	3 0	016		435										
			085	0010		0067	329			647	•••		_			435										
			STD			0068	330			655	001	490	9 0	031	14	437										
			OBS	002		0068	330			655					14	437										
			STD			0065	332	22	2	672	001	330	7 0	045	14	443										
			OBS	003		0065	332	20	2	672					14	443										
			STD	005	) -	0800	335	2	2	697	001	094	7 (	069		444										
			OBS	005	0 -	0080	335	20	2	697						4444										
			STD	007	5 -	0089	336	3	2	706	001	006	2 (	096	14	4445										
			OBS	007	5 -	0089	336	30		706						4445										
			STD	010	0 -	-0074	337	78	2	718	000	896	1 (	119	_	458										
			OBS	010	0 -	-0074	337	780	2	718						4458										
			STD	012	5 -	-0035	339	94		729	000	789	В	141		44B3										
			OBS	012		-0035	339			729						4483										
			STD	015	0 -	-0012	339			729	000	792	7 (	160		4498										
			OBS	015		-0012	339			729						4498										
			STO			-0017	340			734	000	743	5 (	)199		+505										
			OBS	020		-0017	340			734						4505										
			STD			0020	342			747	000	618	5 (	)233		4532										
			065	025		0020	342			747			2 (	200		4532										
			STD			-0014	342			751	000	576	2 (	263		4526 4526										
			OBS	030		-0014	34			751	004	. 5 2 0	, ,	318		4543										
			STE			-0015	347			756	000	)528	, (	,,10		4543										
			obs	040	-	-0015	34	290	, 2	756					1.	<del>+</del>										

TRY IO,	CODE	LATITU	OE LO	NGITUOE 1/18	SOU 10°	ARE	STATI	ON TIA	-   '	YEAR	CRUISE NO.		TOR'S ATION MBER	-	OEPTH TO BOTTOM	MAX. OEPTH OF S'MPL"S			TIONS	WEA THER CODI	CODE	5	5	NOOC TATION TUMBER
318160	WE	7555		1100W	260	$\overline{}$	10 0			969	WE2	073		-	0410	3741123		1	, EK 31	01	X 7	+		0073
				,	1200	WA		WI	_	BARC		IR TEM	. 10		NO.			1 1	١.	, 01	1	1	1	
						COLOR	TRANS.	OW	SPEED OR FORCE	METE	R C		W ET BULR	COOE	ORS. OEPTHS	ORSERVA								
						DΤ	S		505	179	9 -0	11 -	022	5	13									
	MESSENGE TIME O	CAST	CARO	OEPTH 6		*c	Τ,	٠/	SIGM	, , ]		VOLUM		Δ O.	SOL	JNO T		PO	)4-P	TOTAL-P	NO <sub>2</sub> -N	NO <sub>3</sub> -N	SI O4-Si	
	HR 1/10	NO.	TYPE	J GETTIN 0			L.		SIGM	^-1	ANOM.	4LY-X10 <sup>7</sup>		10 <sup>3</sup>	VELC	CITY	O3 ml/l		- at/1	μg + et/1		yg - at/1	μg - at/l	
										_			1.											
	058		STD OBS	0000		073 073	329 329		264 264		001	5591	00	000		430 430								
	050		STD	0010		074	329		265		001	5429	00	16		432								
			088	0010		074	329		265						144									
			STD	0020		075	330		265	-	001	4960	00	31	144									
			OBS STD	0020		075 063	330 331		265 266		001	4156	00	45	144	434								
			OBS	0030		063	331		266		001	*170	00	45	144									
			STD	0050		069	334		269		001	1447	00	71	144									
			OBS	0050		069	334		269						144									
			STD	0075		068	335		270		001	0523	00	98	144									
			OBS STD	0075		068 037	335 337		270 271		000	9574	0.1	23	144	454								
			OBS	0100		037	337		271		000	7714	01	23	144									
			STD	0125		026	338		271		000	8888	01	47	145									
			OBS	0125	0	026	338	50	271	9					145	510								
			STD	0150		053	339		272		000	8429	01	68	145									
			OBS	0150		053	339 340		272		000		02		145									
			STD OBS	0200		075 075	340		273 273		000	1511	02	08	14:									
			STD	0250		070	341		274		000	5791	02	44	145									
			OBS	0250		070	341		274						145									
			STD	0300		045	342		274		000	5181	02	77	145									
			OBS	0300		045	342		274		000		0.7		145									
			STD OBS	0400		012 012	342 342		275 275		000	380	03	54	145									

NODE   STEP   SHIP   LATITUDE   CODE   1/10   SOUARE   STATION TIME   SOUARE   STATION TIME   S																												
NO.   NUMBER   NUMBER   NUMBER   NO.   N	7	NODC										NATOR'S		_	VC 4.5		N TI	STATID			CTR	NCITUDE	LD	ATITUDE		SHIP		-
318160 WE 76010N 070480W 260 60 10 01 065 1969 WEZ 074 0490 02 7 7 00074    WATER   WIND   BARO   AIR TEMP, TO   VIS.   NO.   DBS.   DBSERVATIONS								1	OF						TEAR											CODE		
WATER   WIND   BARO-   COLOR   INANS   DIR   SPECIAL   DEPTH   MI   T ©   S *4.   SIGMA-T   SPECIFIC VOLUME   ANOMALY-1107   DV   X 103   X					+	SEA	HGT PER	DIR	2 WLF.2		$\rightarrow$		+	<del></del>					-		1				+-		1.0	220
COLOR   MANS.   DIR.   SPECIAL   DIR.   DIR.   SPECIAL   DIR.	4	007		7   7	02	-		1		0490	, l			_	1969			_		260	1 1	0480W	107	P010W	1 4	WE	160	1 318
Note   Street   Str														<i>)-</i>						ŀ								
DT S 19 SO5 179 -011 -022 9 13    MESSENGE   CAST TIME of NO. TYPE   DEPTH (m1   T ℃ S ℃. SIGMA-T   SPECIFIC VOLUME ANDMALT-1107   STON MALT-1107   STON MALT-								ATIONS	DBSERVA		CODE				MICIE	OR	D1R,											
TIME of NO. 17PE   DEPTH (m)   T & 5 %   SIGMA-T   OT NO.   SIGMA-T   OT NO.   OT NO										13	9	-022	011	9 -0	17	505	19	5 ]	DT									
TIME of NO. TYPE DEPIR (M) TYPE DEPI						$\top$						5											- 4 0 D	457 6	iGa	MESSEN		
STD 0000 -0074 3291 2647 0015664 0000 14430 14430 065 0BS 0000 -0074 32910 2647 14430	i Ĉ							O <sub>2</sub> ml/l			YN. M.	107 D			MA-T	SIGM	/· ·	5 -/	C.	Т	(m )	DEPTH			10			
065 OBS 0000 -0074 32910 2647 14430		9071	pg - 60/1 pg -	Pg - 401			7,			+	X 10"											-			10	HK 1/		
065 OBS 0000 -0074 32910 2647 14430	- 11	- 1	1							1,,	000	,	1566	003	, 7	261		2201	7/	-00	n	000	CTD	Ι.	ļ	Į		
14430											000	4 0	1200	100											45	0.6		
STD 0010 -0081 3296 2652 0015252 0015 14429											015	2 0	1525	001		265		3296		-00		0010	STD		,	0.0		
OBS 0010 -0081 32960 2652 14429											01)	2 0	1,2,	001														
STD 0020 -0081 3307 2661 0014404 0030 14432											030	4 0	1440	001	61	266	7	3307	81	-00	0	0020	STD	:				
OBS 0020 -0081 33070 2661 14432									432	14					61	266												
STO 0030 -0070 3327 2676 0012906 0044 14442									442	14	044	6 0	1290	001								-						
OBS 0030 -0070 33270 2676 14442									442	14																		
STD 0050 -0086 3350 2695 0011079 0068 14441										_	068	9 00	1107	001														
OBS 0050 -0086 33500 2695 14441										-																		
STO 0075 -0079 3364 2706 0010022 0094 14450 OBS 0075 -0079 33640 2706 14450										-	094	2 00	1002	001														
											110	2 0	0026	000														
STD 0100 -0053 3374 2714 0009352 0119 14468 OBS 0100 -0053 33740 2714 14468											117	2 0.	1722	000								-						
STD 0125 -0003 3385 2720 0008738 0141 14496											141	8 0	1873	000														
OBS 0125 -0003 33850 2720 14496											1	0 0.	, , ,	-														
STO 0150 0040 3390 2722 0008583 0163 14521											163	3 0	1858	000								_						
OBS 0150 0040 33900 2722 14521																	00	3390	40	0.0	)	0150						
STD 0200 0014 3409 2739 0006991 0202 14520									520	145	202	1 0	0699	000	39	273	9	3409	14	00	)	0200	STD	5				
OBS 0200 0014 34090 2739 14520																												
STD 0250 0038 3415 2742 0006669 0236 14540											236	9 0	)666	000														
OBS 0250 0038 34150 2742 14540																												
STD 0300 0029 3421 2747 0006159 0268 14545											268	9 0	)615	000														
OBS 0300 0029 34210 2747 14545									147	14					4 /	214	(0)	3421	29	00	)	0300	85	OF				
STD 0400 -0017 3427 2755 0005427 0326 14541 OBS 0400 -0017 34270 2755 14541											226	7 0	164.2	000				3427	17	0.0	`	0400	CTD					

REFERENCE					E MARSD	EN	STATION 1	IME		ORIGINA	ATDR'S		DEPTH	MAX.		WAVE	WEA-	CLDUD	T		NDDC	
CTRY IO.	CODE	LATITU	DE L	ONGITUDE	SOUAR	RE	(GMT)		AR		TATION	$\neg$	TD	DEPTH		RVATIONS	THER	CODES		S.	ATION	
CODE NO.			1/10	'1/10	10*	1° N	O OAY	IR,1/10		ND. N	UMBER	_	BOTTOM	S'MPL'S	OIR	HGT PER SE	CDDE	TYPE AM	T		UMBER	
318160	WE	75540	0 N NO	70240W	260	50 1	0 01	077   19	69	WE2 075	5	- 10	0530				01	7 5			0075	
						WATE	R	MIND	BARD	AIR TEA	AP. °C	vis,	ND.	SPEC	IAL							
						OLOR 1	IMI DIR	L OR L	(mbs)		WET	COOE	D8S. DEPTHS	DBSERV								
					ļ	-	5 19	SO5	179		-022	9	14		_							
				1		ויט	3 119	305	113	, -011	-022	9	44			- 1						$\Box$
	MESSENGE		CARD	DEPTH (m)	, , ,	~	s ·/	SIGMA	-1	SPECIFIC VOLU		A D		JND	D2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	S1 O4-Si	ρН	Š
	HR 1/10	7 190.	TYPE							ANOMALY-XI	, x	103	. AETC	CITY		μg • e1/l	yg - 01/1	ا/اه - هر	µg = 01/l	yg - ot/(	,	c
																						П
	•		STD	0000	-009	90 `	3297	2653		001515	1 00	000		423		' '	·		•			
	077	7	oBs	0000	-009		32970	2653						423								
			STD	0010	-00		3315	2667		0013769	9 00	14	14									
			OBS	0010	-00		33150	2667					14									
			STD	0020	-01		3345	2692		001139	7 00	27	14									
			OBS	0020	-01		33450	2692		001100		120	144	424								
			STD OBS	0030	-010 -010		3349 33490	2695 2695		001109	1 00	38		427								
			STD	0050	-010		3357	2702		001046	7 00	060	14									
			OBS	0050	-010		33570	2702		001040		,00	144									
			STD	0075	-003		3369	2709		0009802	2 00	85	144									
			085	0075	-00		33690	2709					144	469								
			STD	0100	000	03	3383	2718		0008924	01	.09	144	495								
			OBS	0100	000		33830	2718						495								
			STD	0125	004		3387	2719		0008829	01	.31	145									
			085	0125	004		33870	2719					145									
			STD	0150	009	-	3394	2725		0008336	0 1	52	145									
			OBS STD	0150	009		33940	2725					145									
			085	0200 0200	013 013		3415 34150	2736		0007260	0 1	91	145									
			STO	0250	001		3420	2736 2745		0006375	. 02	25	145									
			085	0250	00		34200	2745		0000011	, 02	. 25	145									
			STD	0300	00		3424	2748		0006086	0.2	56	145									
			OBS	0300	00		34240	2748					145									
			STD	0400	000		3430	2756		0005334	03	14	145									
			OBS	0400	000	06	34300	2756					145									
			ST0	0500	-000		3433	2759		0005018	3 03	65	145	563								
			085	0500	-000	07	34330	2759					145	63	•							

REFERENCE SNIP LATITUDE LONGITUDE SY SOUARE GMT) YEAR COURSE STATION TO	
CINY ID. COOE STRINGS BOTTOM CARE	COOF NUMBER
(710) 10 1 10 1 10 1 10 1 10 1 10 1 10 1	70 7 7 0076
318160 WE 75460N 070420W 260 50 10 01 098 1969 WEZ 076 0450	
COLOR TANKE SPEED METTER ORY WEST CODE ORS. ORS.	SPECIAL ERVATIONS
CODE IMI OR OR (mbs) BULB BULB DEPTHS OFF	
OT S 22 S11 169 -019 -028 9 13	
MESSENGR CAST CARO COTH - I TO STATE SPECIFIC VOLUME SAO SOUNO	00-1/5 PO4-P TOTAL-P NO2-N NO3-N SIO4-SI
TIME OF NO. TYPE DEFINANT VELOCITY	
HR 1/10	
STD 0000 -0078 3300 2655 0014961 0000 14429	9
098 085 0000 -0078 33000 2655 14429	
STO 0010 -0085 3305 2659 0014549 0015 14428	В
DBS 0010 -0085 33050 2659 14428	
STD 0020 -0080 3330 2679 0012645 0028 14436	
08S 0020 -0080 33300 2679 14436	
STO 0030 -0096 3352 2697 0010901 0040 14433	
08S 0030 -0096 33520 2697 14433	
310 0030 10100 3203	
003	
STO 0075 -0070 3374 2714 0009292 0085 14456 08S 0075 -0070 33740 2714 14456	
STD 0100 0002 3386 2721 0008691 0108 14495	
08S 0100 0002 33860 2721 14495	
STD 0125 0032 3392 2724 0008388 0129 14513	3
085 0125 0032 33920 2724 14513	
STD 0150 0045 3405 2734 0007472 0149 14525	
OBS 0150 0045 34050 2734 14525	
STD 0200 0036 3410 2738 0007039 0185 14530	
085 0200 0036 34100 2738 14530	
STD 0250 -0030 3414 2745 0006371 0219 14509	
003 0230 -0030 3120 00057(0 03/0 1/5)0	
310 0300 -0021 3122 2132	
08S 0300 -0027 34220 2751 14519 STO 0400 -0017 3431 2758 0005124 0303 14542	
08S 0400 -0017 34310 2758 14542	

	91H2 3000	LATITU		DNGITUDE * '1/10	SO SO	RSOEN		GMTI		YEAR	CRUISE NO.		TATION		OEPTH TO BOTTOM	MAX, DEPTH OF S'MPL*S		WA\ SERVA	TIONS	WEA THE	CODE	5		NOOC NOITATE
318160	WE	7540	1/10 O	71070W	260	51	10 0			1969	WE2			_	0480	2.WLF.2	GIA.	HGE	PER SE	70	TTPE AA			007
10100			314   0		1 120		TER		VIND	BARC		IR TEM		Т.	NO			ì' '	'	,	1 , , ,	1	ı	
						COLOR	TRANS.	OIR,	SPEEG OR FORCE	METE	R C	DRY ULB	WET	CODE	OBS. OEPTHS	SPEC OBSERV								
						OT	S	22	511	16	9 -0	19	-028	9	13									
	AESSENGR TIME O	CAST NO.	CARD	OEPTH	(m)	т *с	S	•/	SIGA	AA-T	SPECIFIC	VOLUA ALY-X10	ĄĘ ŏ	Δο γΝ. Μ x 10 <sup>3</sup>	SOU	UNO	O2 ml/		04P - 61/I	TOTAL- /10 + gu		NO3-N		
ľ									+				$\top$					1			1			1
'		' '	STO	000	0 '-0	0096	328	3 4	26	42 '	001	6129	, ' 0	000	14	418		1	- '		1	ı	1	1
	102		085	000		0096	328		26							418								
			STO	001		0100	329		26		001	5651	. 0	016		419								
			OBS STD	001		0100	329		26		001	220/		030		419 432								
			OBS	002		0085	332		26		. 001	2277	, 0	0,0		432								
			STO	003		0129	335		269		001	0950	0	043		417								
			085	003	0 -0	129	335		269	7					14	417								
			STD	005		126	335		270		001	0411	. 0	064		423								
			085	005		0126	339		270		000			000		423								
			ST0 085	007 007		0112	336 336		270		000	9825	, 0	089		435 435								
			STD	010		0121	337		27		000	9097	7 0	113		436								
			085	010		121	337		27						14	436								
			STO	012		0018	338		27:		000	8436	0	135		490								
			OBS	012		0018	338		27							490								
			STD	015		0064	340		272		000	7963	3 0	155		533								
			08S STD	015		0064	340 341		27:		000	7343	3 0	194		533 563								
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			STD	025		0144	343		27		000	6238	3 0	228		590								
			085	025		0144	343		27							590								
			STD	030		0800	343		27		000	5800	0	258		569								
			085 ST0	030		0080	343		27		000	E 2 2 2		313		569 561								
			510			111/7	34:	2.5	41	0 /	000	2662	, 0	113	14	101								

REFERENCE	SHIP				E E	MARSOI		STATION T	IME		C	RIGIN	ATOR'S		OEPTH	MAX.			AVE		WEA-	Crono	T		NOOC	1
CTRY ID.	COOE	LATITU	1/10	LONGITUOE 1/10	DRUF			IGMT)	n 1/10	YEAR	CRUISE NO.		TATIO		TO BOTTOM	OF	1 ~		VATI		THER	COOES			TATION	
1		3500			+		-				1			_		S'MPL"	S DIR	. Н	GT PE	SEA	`	TYPE AM	Y	-		-
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							ODE	TRANS, OIR,	FORCE			JLB	SAF		DEPTHS	OBSERV	ATION	S								
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	TIME	or NO.	CARD		(m )	1 %	2	5 %.	SIGA	AA-T	SPECIFIC			OYN. M.		DCITY	O 2 m	1/1	PO <sub>4</sub>		TOTAL—P µg + qt/I	NO2~N	NO3-N	\$1 O4-\$i   yg - al/l		ç
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			OBS	001		-009		32850	26		001					422										
			ST			-01		3337	26		001	198	6	0030		419										
			OBS	002		-01		33370	26						14	419										
			ST	003	0	-012	2.5	3345	26	93	001	134	5	0042	14	418										
			OBS	003		-012	25	33450	26							418										
			ST			-014		3355	27		001	051	2	0064		414										
			OBS	005		-014		33550	27							414										
			ST			-013		3363	27		000	991	8	0090		425										
			OBS	007		-013		33630	27				_	. 1		425										
			ST			-013		3370	27		000	935	8	0114		429										
			OBS ST	010 012		-013		33700 3384	27		000	055	1	0136		429 470										
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			ST	_		003		3395	27		000	318	0	0157		520										
			OBS	015		003		33950	27				•			520										
			ST			01		3414	27		000	719	8	0195		564										
			OBS	020		01:	0	34140	27:	37					14	564										
			ST	025	0	014	6	3425	27	43	0000	563	1	0230	14	590										
			OBS	025	0	014	6	34250	27	43					14	590										
			ST			01		3437	27		000	592	2	0261		610										
			OBS	030		01.		34370	27							610										
			ST			02:		3452	27		000	533	4	0318		655										
			OBS	040		021		34520 3452	27		000	463	0	0367		655 632										
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STEP   Continue   Co																			
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318160   WE		COOF	*								POTTONA OF	003							
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MISSINGE   CAST   CAST   NO.   Try   CAST   NO.   Try   S   S   S   S   S   S   S   S   S						COLOR	TRANS OR	SPEED MAST	0-	VIS,	OBS. OBSE								
Missing   CARD   CARD   TYPE   OEPTH (m)   T \( \cap \)   S \( \chi \),   SIGMA=T   MISSING   TYPE   MISSING   TYPE   OEPTH (m)   T \( \chi \)   S \( \chi \),   SIGMA=T   MISSING   TYPE   OEPTH (m)   T \( \chi \)   S \( \chi \),   SIGMA=T   MISSING   TYPE   OEPTH (m)   TYPE							(m)	FORCE [mb		DLE	DEFINS								
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						0191			0005117	0380									
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REFERENCE	SNIP				E 5	MARS	OEN	STAT	ION T	IME		-		ATOR'S		OEPTH	OEPTI			WAV	TIONS		WEA-	CLO				100C	
CODE NO.	COOE	LATITU	i i		DRIFT	sou				10.1.110	YEAR	CRUISE NO.		TATION		10 80110M	0.5				PER 5		THER	TYPE				UMBER	
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318160	WE	7533	ON	070390W	1	260				163	1969		_	MP. °C		0530		$\perp$		1	- 1	- 1	02	6	0		I	0080	1
						}	WAT			VINO SPEED	- BAR	J-	DRY	WET	vis.	NO. ORS.		ECIA											
						i	COLOR	TRANS.	OIR.	FORC	4-1		UL8	RULE		DEPTHS	OSSER	VAII	ONS										
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ľ	MESSENGR TIME		CARC		(m)	τ	℃	\$	٠/	SIG	MA-T		VOLU		DYN. N	, ,,,,,	UNO :	0:	m1/1		04-F - at/l		- 01/l	NO2-		NO3-N pg - al/l	SI O4-Si µg = at/l	pН	C
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			ST				080	332			75	001	302	8 (	0030		435												
			OBS	002			080	332			75					14	435												
			ST	003	0	-00	092	334	+0	26	88	001	183	3 (	0042	14	433												
			OBS	003	0	-00	092	334	+00		88						433												
			ST				107	334			95	001	116	0 (	0065		431												
			OBS	005			107	334			95						431												
			ST				110	339			03	001	037	1 (	0092		435												
			OBS				110	335			03	000	953	- (	0117		435												
			ST				046	337			/12 /12	000	773	2 (	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		471												
			OBS ST	010 D 012			046 015	338			720	000	875	4 (	0140		505												
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			ST				090	339			723	000	850	2 (	0162		544												
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			ST			0	153	34	14	27	734	000	749	9 (	0202	14	583												
			OBS				153	34	140	27	734					14	583												
			ST		0	0	155	342	25	27	743	000	669	7	0237		594												
			OBS	025	0		155		250		743						594												
			ST				182	341			749	000	616	7 (	0269		615												
			OBS				182		350		149	000	E /-	2	022		615												
			ST				220	344			757	000	1547	2	0327		651												
			OBS				220 163	349	490		757 762	000	495	7	0380		642												
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			OBS	050	U	0	163	54	500	21	02					14	072												

REFERENCE CIRY IO.	SNIP	LATITU	OE LO	NGITUGE NOCIE	MARSOEN SOUARE	STATION T			OR'S NON ABER	DEPTH TO BOTTOM	MAX. DEPTH OF S'MPL'S	OBSI	WAVE RVATIONS	CODE	COOES	T	2.	NODC TATION NUMBER
318160	WE	7541	ON 07	0040W	260 50	10 01	175 1969	WE2 081		0530				02	6 8			0081
			'	'	WA	TER	VINO BAR	AIR TEMP.		NO.	CDC	IAL	' '		•	'	'	
					COLOR	TRANS OIR.	SPEED MET	ER DRY V	VET COD	OBS.	OBSERV							
						<del>  </del>	FORCE (mb		17 7		-							
r					DT	S 22	S06   15	01 -011 -0	11/	14	<u> </u>						1	
	MESSENGR TIME D HR 1/10	CAST NO.	CARD TYPE	OEPTH (m)	T ℃	s ·/.	SIGMA-T	SPECIFIC VOLUME ANOMALY-X10?	₹ △ C 0YN. A x 10 <sup>3</sup>	V. VELO	OCITY	O <sub>2</sub> ml/l	PO4-P ug - 01/I	TOTAL-P	NO2-N ng - pi/i	NO3-N pg - a1/l	SI O4-Si µg = al/l	
										$\neg$								
			STD	0000	-0089	3272	2633	0017071	0000		420		'					
	175		OBS	0000	-0089	32720	2633				420							
			STD OBS	0010 0010	-0098 -0098	3275 32750	2635 2635	0016807	0017		418 418							
			STD	0010	-0098	3307	2660	0014407	0033		432							
			OBS	0020	-0080	33070	2660				432							
			STD	0030	-0114	3335	2684	0012145	0046	14	422							
			OBS	0030	-0114	33350	2684				422							
			STD	0050	-0133	3346	2694	0011233	0069		418							
			085	0050	-0133	33460	2694	0010170	000		418							
			STD OBS	00 <b>7</b> 5 0075	-0122 -0122	3360 33600	2705 2705	0010179	0096		429 429							
			STD	0100	-0050	3375	2714	0009289	0120		469							
			OBS	0100	-0050	33750	2714	*********			469							
			STD	0125	0013	3385	2719	0008819	0143	14	504							
			OBS	0125	0013	33850	2719				504							
			STD	0150	0080	3398	2726	0008212	0164		540							
			OBS	0150	0080	33980	2726	0007/11	0701		540							
			STD OBS	0200 0200	0130 0130	3413 34130	2735 2735	0007411	0203		573 573							
			STD	0250	0170	3427	2743	0006659	0238		601							
			OBS	0250	0170	34270	2743	0000000	<b>U</b> -50		601							
			STD	0300	0183	3434	2748	0006250	0271	14	616							
			OBS	0300	0183	34340	2748				616							
			STD	0400	0184	3449	2760	0005168	0328		635							
			OBS STD	0400 0500	0184 0130	34490 3449	2760 2764	0004767	0377		635 627							

REFERENCE	SHIP	LATITU	05	ONGITUDE	E MAR	SOEN IARÉ	STATION TI			ORIGINA			DEPTH DEP	!	WAVE	WEA				NODC	1
CODE NO.	COOE	•	1/10	1/10	10°	1 1*	MO   DAY IH	YEAI	CRUIS NO.		TATION	BC	TO O		SERVATIONS HGT FER SI	0000				TATION	
318160	WE	7548		69430W	259			87 196	_	+		1	450	L 3 DIA.	AGI PER SI	02		1			
1 310100	"	1340	011   0	0743011	1200	WA		VINO	- 1	AR TEA			-1			02	6   8	1	ŀ	0082	ı
						COLOR			KO	ORY	WET C	00E	OBY OPER	PECIAL RVATIONS							
						COOE	lm)	FORCE (r	-	BUL\$	SULB	_	crins								
						DT	S 20	508 1	50 -0	017	-025	7	13								
	MESSENG TIME		CARD	OEPTH &	n) T	°C	s %.	SIGMA-T		ic volu		D	SOUND	O2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	5104-5		5
	HR 1/10		TYPE					Signia-1	ANDA	WALY-X1	x 1	03	VELOCITY	U2 mi/1	yg - 01/I	µg - e1/1	νg - αl/l	μg - αt/l	νg - 01/		C
																					$\dashv$
			STD	0000		075	3290	2647	001	1573	7 000	00	14429	'		1	'	'	'		,
	18	7	085	0000		075	32900	2647					14429								
			STD OBS	0010		082 082	3295 32950	2651 2651	001	1532	5 00	16	14428								
			STD	0020		067	3320	2670	0.03	3458	8 003	3 0	14428								
			OBS	0020		067	33200	2670	001	2420	0 00.		14440								
			STD	0030		066	3350	2695	001	1116	1 004	12	14447								
			OBS	0030	-0	066	33500	2695					14447								
			STD	0050		052	3361	2703	001	036	7 006	54	14458								
			OBS	0050		052	33610	2703					14458								
			STD	0075		021	3370	2709	000	9806	6 008	39	14478								
			OBS	0075		021	33700	2709					14478								
			51D 08S	0100		048 048	3375 33750	2714 2714	000	929	7 01	13	14470								
			SID	0125		040	3392	2724	000	8432	2 013	3.5	14470								
			OBS	0125		040	33920	2724	000	0432	2 01.	,,	14517								
			STD	0150		085	3399	2727	000	816	7 019	56	14542								
			085	0150	0	085	33990	2727					14542								
			STD	0200	0	142	3419	2739	000	704	2 019	94	14579								
			OBS	0200		142	34190	2739					14579								
			STD	0250		169	3428	2744	000	6576	6 022	8 2	14600								
			OBS	0250		169	34280	2744					14600								
			STD	0300		200	3440	2751	000	)593	5 029	9	14624								
			OBS STD	0300		200 180	34400 3449	2751 2760	000	5139	5 03	14	14624								
			OBS	0400		180	34490	2760	000	213	, 05,	. 4	14633								
			000	0400	U	100	34470	2100					14033								

FERENCE IV IO.	SHIP	LATITU		PNGITUOE 5			ION THE	YEAR	CRUISE STA	NOI	TO DE	OF	WAVE ERVATIONS	COOR	CODES		S1	NODC TATION TUMBER
18160	WE	7550	1/10 ON OA	8500W	259 5	-	0AY HI				0310	APL'S OIR	NGT PER S	02	6 8	1		008
10160	I ME I	7550	טאן טנ	, a Jook	· -	WATER		iNO T	AID TEAR					1	1 - 1 -	1	ł	
					_	LOR TRANS	1	SPEED MAET	0-	VIS.	NO. OBS.	SPECIAL SERVATIONS						
					co	DE (m)	OIL.	FORCE tmb		ULB	DEPTHS -							
					0	TS	20	508   15	0 -015 -0	25 7	12							
	MESSENGE TIME NR 1/10	CAST ND,	CARO TYPE	DEPTH (m)	1 ℃	5	٠/	SIGMA-T	SPECIFIC VOLUME	₹ △ D DYN. M X 10 <sup>3</sup>	SOUNO		PO4-P µg + at/I	TOTAL-P ug - et/l		NO3−N I\Ie - ek	\$1 O4-\$i µg = at/I	
			STO	0000	-005			2642	0016191	0000								
	205	1	085	0000	-005 -005		850	2642 2639	0016404	0016	1443							
			STD OBS	0010	-005		820	2639	0018404	0016	1443							
			510	0020	-005			2652	0015175	0032								
			OBS	0020	-005	8 32	980	2652			1444	1						
			STO	0030	-003	6 33	36	2682	0012350	0046								
			OBS	0030	-003		360	2682			1445							
			STD	0050	-002			2691	0011533	0070								
			085	0050	-002		470	2691	0010335	0098	1446							
			STD	0075 0075	-001 -001		580	2699 2699	0010735	0090	1447							
			STO	0100	-001			2708	0009928	0123								
			OBS	0100	-001		690	2708			1448	7						
			STD	0125	002	2 33	80	2715	0009247	0147								
			OBS	0125	002		800	2715			1450							
			STD	0150	006			2721	0008698	0170								
			OBS STD	0150 0200	006 013		900	2721 2732	0007666	0211	1453							
			OBS	0200	013		100	2732	0007000	0-11	1457							
									0007021	0247								
			STO	0250	016	8 34	~ ~	2/39	0007021									
			OBS	0250 0250	016 016		220 220	2739 2739	0007021	0247	1459							
						8 34 0 34	220		0006830	0282	1459	9 3						

									,													
REFERENCE	SHIP			- E	MARS		STATION		YEAR	ORIGINA				MAX.		WAVE	าคร	WEA-	CLOU			NOOC
CODE NO.	COOE	LATITU	1/10	LONGITUDE NO.	10°			HR,1/10			UMBER		70	OF _		HGT FER		COGE	TYPE A			UMBER
	O WE	7542			259	1	10 02		1969	WE2 084		04			<i>y</i>		1	72	7 8	1		0084
31816	Of ME	1042	ן אוכ	1 IMCODEGO	اددع	WAT		WINO		A ID TEA		-	0.	1	—,'	1	ı	1	1 . 1 .	1	'	
					Ì	COLOR		IR. SPE	D MET	)-	WET	AIZ O	95.	SPÉCIA BSERVATI								
					1	CODE	(m)	FOR			8078		PTMS		_							
						DT	S 1	2   51	8   13	4 -011	-021	8   1	3									
	WESSEN	R CAST	CARG			℃	5 ./	-		SPECIFIC VOLUA	ME E	0.7	SOUNT	0	2 m1/I	PO <sub>4</sub> -	-P	TOTAL-P	NO <sub>2</sub> -N	NO3-N	51 O <sub>4</sub> – Si	
	HR 1/1	OF NO.	TYPE		'	C	> "	. 21	GMA-T	ANOMALY-I10	7 OYN		VELOCI	177	2 mi/1	νg - c		ו/ום - 9ע	и <b>р</b> - 01/			pĦ
	FIR 171	<del>'                                       </del>			+						_	1				†	$\dashv$			1		
	1	1	ST	0000	-00	060	່ 3280	2	538	0016555	5 '00	00 1	1443	35 '		1	'	'		,	1	1
	06	8	085			060	3280	0 2	538				1443	35								
			ST	D 0010	-00	072	3290	2	546	0015742	2 00		1443									
			085			072	3290		546				1443									
			ST			083	3318		569	0013554	4 00		1443									
			OBS			083	3318		569 585	0012061	1 00		1443									
			ST		-00		3338		685	0012061	1 00		1444									
			OBS ST	-		080	3355		699	0010718	8 00		1444									
			085			080	3355		699	0010.10		-	1444									
			ST			065	3360		703	0010382	2 00		1445									
			085			065	3360	0 2	703				1445	56								
			ST		0(	020	3365	2	703	0010382	2 01	19	1450	00								
			085	0100	0(	020	3365	0 2	703				1450									
			ST			005	3380	_	716	0009108	8 01		1449									
			085	_		005	3380	_	716				1449									
			ST			018	3385		719	0008842	2 01		1451									
			085			018	3385		719 734	0007444	4 02		1451									
			ST			078 078	3408	_	734	000144-	+ 0-		1454									
			OBS ST			078 175	3428		1 34 744	0006622	2 02		1460									
			085			175	3428		744	100002			1460									
			ST			201	3437		749	0006169	9 02		1462									
			085	_		201	3437	0 2	749				1462	24								
			ST		0	198	3449	2	759	0005284	4 03	31	1464	41								
			088	0400	0	198	3449	0 2	759				1464	41								

REFERENCE					MARS	OEH	STATIO	ON TIM	AE	_		ORIGINA	TOR'S	$\neg$	DEPTH	MAX		WA	VE	WEA-	CLOUD	Γ		100C	
CTRY ID.	SHIP	LATITU	DE FO	NGITUOE	SOU	ARE	(G	(TM)		YEAR	CRUISE		NOITAT		TO AOTTOB	OEPT	1 00		SNOIL	THER				UMBER	
CODE NO.		•	1/10	1/10	10"	1		AY HR			HO.		UMBER	$\rightarrow$		3 MILE	*S DIR	HGT	PER SE	^	TTP: AM	-		0085	
318160	WE   1	7532	8N   06	9285W	259		10 0			969	WE2				0470	ļ		اا		72	7   8	l	- 1	رەس	
					ļ	WAT	TER	WI	NO	BARO		IR TEN		VIS.	NO. OBS.	SP	ECIAL								
						COLOR	TRANS.	OIR	OR OR	(mbs		DRY UL8	WET	CDDE	DEPTHS	ORSER	VATIONS								
					ł	DT	S	12	S18	134		11	-021	8	13			1							
_						יט	131	12	310	120	1				127	<u> </u>		1	-						
	ESSENGE DE	CAST NO.	CARO	DEPTH (m1	T	℃	2 .	·/	SIGM	A-T	SPECIFIC	VOLU#	, L	∑ D YN. M X 10 <sup>3</sup>		OCITY	O2 ml/		O4-P g - 01/I	101AL-9 1/10 - 94		NO3-N	\$1 O4-\$i pg - 01/1	рН	c c
<u> </u>	X 0 (0																								$\Box$
1	1		STD	0000	-01	090	329	0	264	7 '	001	5688	в'с	000	114	422	,	1		'	•				
	083		OBS	0000		090	329		264	7						422									
			STD	0010	-00	093	329	3	265	0	001	5442	2 0	016		423									
			OBS	0010	-00	093	329		265							423									
			STD	0020		087	332		267		001	3004	4 C	030		432									
			OBS	0020		087	332		267							432									
			STD	0030		090	333		268		001	191	7 0	042		434									
			OBS	0030		090	333		268					0.00		434									
			STD	0050		115 115	335 335		269 269		001	098	1 (	065		427									
			OBS	0050 0075		100	336		270		061	0099	۰ ۵	091		440									
			STD OBS	0075		100	336		270		001	009	, ,	, , , ,		440									
			STD	0100		038	337	_	271	-	000	941	7 0	116		475									
			OBS	0100		038	337		271							475									
			STD	0125		037	338		271		000	887	2 0	139	14	515									
			OBS	0125		037	338		271	9					14	515									
			STD	0150	0	065	339	4	272	4	000	8424	4 0	160		533									
			OBS	0150	0	065	339	40	272	4						533									
			STD	0200		144	341		273		000	773	7 0	201		579									
			085	0200		144	341		273							579									
			ST0	0250		172	342		274	-	000	667	5 (	237		602									
			OBS	0250		172	342		274		000	(12		200		602									
			STD	0300		186	343		274		000	612	4 (	269		617									
			OBS	0300		186	343		274		000	555	0 0	327		655									
			STD	0400		230 230	344		275	_	000	222	,	, , , , ,		655									
			085	0400	U	250	244	70	213	0					4-	0,00									

					_															
REFERENCE	SHIP				MARSOE	N	STATION TH		ORIGI	NATOR	S	CEPTH	MAX.		WAVE	WEA	CLOUD			NODC
CTRY IO.	CORE	LATITUO		ONGITUDE			(GMTI	YEAR	CRUISE NO.	STATIC		TO	OF		ERVATIONS	THER	CODES			UMBER
1	+		1/10	1/10	1	_	MO CAY H			NUMB	-		S'MPL'S	DIR	HGT PER SE	Α	TYPE AM	1		
31816	O WE	75250	ON LO	69480W	1			95 196		86		0540				72	7 8	1		0086
					$\vdash$	WAT			KC	EMP. °C	vis.	NO.	SPEC							
						LOR	TRANS. DIR.	0.0	TER DRY bs) BULB	BUL		DEPTHS	OBSERV.	ATIONS						
					D		S 15	FORCE	25 -001	-01		14	-							
		1			10	1	3 [17]	71111	23 -001	101		1								
	MESSENGR	CAST	CARD	DEPTH (m)	T *C		s °/	SIGMA-T	SPECIFIC VOL		₹ ∆ D DYN. M		UND	O2 ml/l	PO4-P	TOTAL-P	NO2-N	NO3-N	SI 04-Si	рн
	HR 1/10	1	1176						Anomatio	***	X 10 <sup>3</sup>	VEL	OCITY		µg + a1/1	l/10 - gu	१५० - १५०	yg - al/l	yg - al/l	
	•		STO	0000	-009		3281	2640	00163	78	0000		421							
	095	i	OBS	0000	-009		32810	2640					421							
			STD	0010	-009		3300	2655	00149	15	0016		425							
			OBS	0010	-009		33000	2655					425							
			STO	0020	-009		3329	2679	00126	8 8	0029		431							
			OBS STD	0020	-009 -009		33290 3346	2679 2692	00113	77	0041		431 434							
			OBS	0030	-009		33460	2692	00113	1 1	0041		434							
			510	0050	-009		3353	2698	00108	35	0064	-	439							
			OBS	0050	-009		33530	2698	00100	,	0004		439							
			STD	0075	-014		3363	2708	00098	77	0090		418							
			OBS	0075	-014		33630	2708					418							
			STD	0100	-012		3366	2710	000968	3 3	0114		431							
			OBS	0100	-012	9	33660	2710				14	431							
			STD	0125	-009	0	3382	2721	000858	3 3	0137	14	456							
			OBS	0125	-009	0	33820	2721				14	456							
			STD	0150	000	6	3390	2724	000839	99	0158		505							
			OBS	0150	000		33900	2724					505							
			STD	0200	015		3419	2738	00071	07	0197		583							
			OBS	0200	015		34190	2738					583							
			STD	0250	020		3434	2746	00063	74	0231		615							
			085	0250	020		34340	2746	00060	1.0	0242		615							
			STD	0300 0300	022		3442 34420	2751 2751	00060	10	0262		637 637							
			SID	0400	022		34420	2757	000549	2 2	0319		656							
			OBS	0400	023		34500	2757	00054	, ,	0019		656							
			STD	0500	023		3453	2762	00050	6.2	0372		660							
			OBS	0500	020		34530	2762	00000	-			660							

REFERENCE   SHIP CODE   CODE	NOOC STATION NUMBER
CODE NO. 1/10 1/10 2 10 11 MO DAY HR.1/10 NO. NUMBER BOTTOM START'S DIR HG TEE SEA CODE TITE ANT	NUMBER
	0087
1 2 10 10 0 WE   7 2 1 7 0 N   0 0 0 2 4 0 W   2 2 9 1 2 0 1 1 0 2 1 1 1 0 1 2 9 9 1 WE 2 0 8 7 1 1 0 4 7 0 1 1 1 1 1 1 2 1 7 1 8 1	0087
WATER WIND AD TIME TO	
SOLOGIA SEED BARO VIS. ORS SPECIAL	
COLOR, ITAMAS, QIR, OAR METER ORY WET (COOR OFFINS OBSERVATIONS COOR OF OR OAR)	
DT S 14 505 130 -011 -011 5 13	
MESSENGE CAST CARD OSOTH (-) T TO SEC OSOTH (-) TO SEC OS	
TIME of NO. TYPE DEPTH (m) C S %. SIGMA-T ANOMALY-X107 DYN. M. VELOCITY O2 ml/1	1 O4-Si 19 - 61/1 pH
HR 1/10 X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup> X 10 <sup>2</sup>	
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116 085 0000 -0100 32560 2620 14413	
STD 0010 -0095 3268 2629 0017353 0018 14418	
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STD 0020 -0092 3284 2642 0016130 0035 14424	
OBS 0020 -0092 32840 2642 14424	
STD 0030 -0092 3322 2673 0013212 0049 14431	
OBS 0030 -0092 33220 2673 14431	
STD 0050 -0102 3340 2688 0011789 0074 14432	
OBS 0050 -0102 33400 2688 14432	
STD 0075 -0127 3352 2698 0010776 0102 14426	
OBS 0075 -0127 33520 2698 14426 STD 0100 -0109 3360 2704 0010208 0129 14440	
0BS 0100 -0109 33600 2704 0010208 0129 14440	
STD 0125 -0023 3375 2713 0009403 0153 14486	
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STD 0150 0016 3384 2718 0008908 0176 14509	
OBS 0150 0016 33840 2718 14509	
STD 0200 0113 3405 2730 0007900 0218 14564	
OBS 0200 0113 34050 2730 14564	
STD 0250 0174 3420 2737 0007218 0256 14602	
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FER	ENCE	SHIP			± f.	MARS			ION 11				NATOR'S		OEPTH	MAX.	OBS	WAVE		WEA-	CLO				ATION
RY.	ID.	COOE	LATITU		DNGITUOE E	SOUA	- 1				EAR	RUISE NO.	STATION		OTTOM	0.5		HGT PER		OOE	TYPE				JABER
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				STD	0020	-00	-	329		265	-	00153	00 0	033		427									
				OBS	0020	-00		329		265 267		00129	02 0	048		432									
				STD	0030	-00		337		267	-	00123	92 0	040		432									
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				STD OBS	0075	-00	-		500	270		00103.	_ ,	- , -	-	449									
				STD	0100	-00	-	33		271		00094	82 0	123	14	446									
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				STD	0125	00	010	33	86	272	0	00087	28 0	145	14	502									
				OBS	0125		010	33	860	272	0				14	502									
				STD	0150	0.0	065	33	93	272	3	00085	00 0	167	14	533									
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				STD	0200	0	140	34	13	273		00074	82 0	207		577									
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			OBS	007		-0080		3360		270							444												
			STD	010	0 -	-0030	3	3370	0	270	9	000	975	8	0122	14	447	78											
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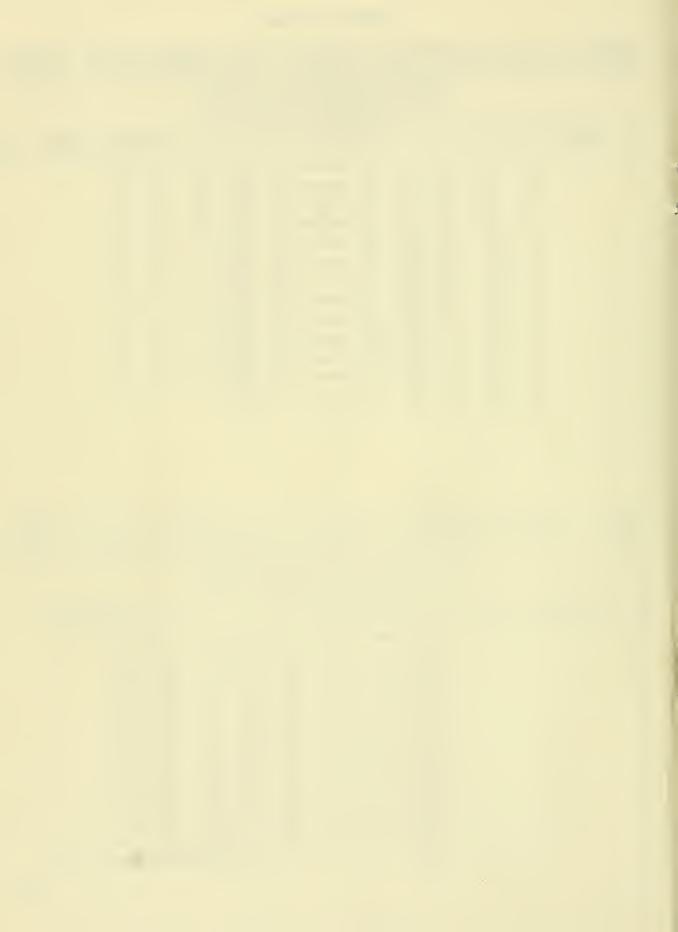
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REFER		SNIP	LATITU	DF	LONGITUDE	DRIFT	MARS			ON TI		YEAR	CRUISE		STATION		DEPTN	MAX.	D8	WAVE SERVATI		WEA-	CLOUD			NOCC	
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								COLOR	TRANS.	OIR.	SPEEO OR FORCE	M ETER	t   1	ORY ULB	WET	COOE	DBS. DEPTHS		CIAL 'ATIONS								
								pΤ	S	09	S15	045	-	08	-011	9	12										
		MESSENG							1		1		SPECIFIC		:	- L D	1,0	UND		POA	, ]	TOTAL-P	ND2~N	ND N	S1 04-S		5
		TIME	O NO.	TYPE		-l (m)	1	℃	s	٠/٠٠	SIGM	7-A	ANOM	ALY-X	107 I	X 10 <sup>3</sup>		DCITY	D3 ml/	1 104		μg - α1/1	νο - αl/l	NO3-N pg - oi/l	νη - 01/		Ċ
		HR 1/10	1	-			+		+		+						+			-	-				_	+	$\dashv$
			1	! 5T	00 0	00	-01	068	327	70	263	0 '	001	729	4 (	0000	14	430		1	- 1		ı	I	1	1	- 11
		10	2	OBS		-		068	327		263						14	430									
				ST				070	32		263		001	728	1 (	017		430									
				OBS				070	32		263							430									
				ST				073	327		263		001	726	5 (	035		430 430									
				OBS		_	-01	080	32		263 266		001	.17	2 (	050		434									
				ST OBS		-		080	33		266		001	417	2 (	0000		434									
				ST				116	33:		268		001	235	7 (	077		424									
				OBS				116	33:		268		001					424									
				ST			-0		339		269		001	062	7 (	106		433									
				OBS	-		-0		33!	520	269	8					14	433									
				ST	D 01	00	-0	100	336	53	270	6	001	100	0 (	132	14	444									
				OBS	01	00		100	336		270						-	444									
				ST				084	33		271		000	929	4 (	156		457									
				OBS		_		0B4	33		271			_				457									
				ST	_	-		075	338		271		000	878	5 (	179	-	466									
				OBS				075	331		271		00-			210		466									
				ST		-		037	341		273		000	127	2 (	219		530 530									
				OBS				037	340		273		000	4 20	4	253		516									
				ST		-		015 015	34	160	274 274		000	029	0 (	1233		516									
				OBS ST				020	34		275		000	595	4 (	283		541									
				085		-		020		230	275		000	,,,	,	,-35	-	541									
				003	, 05	~		020	740		,																

REFERENCE	SNIP	LATITUDI		NGITUDE		RSDEN		TION				ORI	GINAT	DR'S		DEPTH	DEF	AX. PTH		WAV RVA1		wı		CLOUD			NDDC	
CODE NO.	CODE		/10	1/10	10°				HR.1/10	YEAT	JC.F	ND.		TION		DT MOTTOB		)F			ER SE	TH CO	Ds L	TYPE AM			TATION NUMBER	
	W.E.				26	_	-			196	-	_	00 C		1	0340	-	103	) IIIC.	HGI P	ER 31	0	_	5 8	1		0093	
318160	I ME I	76075	ni   U /	3150W	20		TER	25	117	1740	9   14		TEASE.	<b>4</b> ℃ [			1		ا,	- 1	-1	1 0	ا د	ه ا د	1	1	0093	
						COLOR	· -	+	SPEE	0 M	ARO- ETER	ORY			VIS.	ND. OBS.		SPECIAL ERVATIO										
						CODE		DIR	FOR		nbsł	BUL		บเต		DEPTHS	0031	ENVAIIC	143									
						DT	S	09	512	2 0	45	-008	3 -0	11	9	12												
	MESSENGR TIME		CARD	DEPTH	m)	т 10		٠/	516	GMA-I		ECIFIC V		₹ Z DYN	7 D		UND	0.0	mI/I	PO.	4-P	TOTAL	_P	NO <sub>2</sub> -N	NO3-N	SI D4-S	рН	s C C
	HR 1/10	NO.	TYPE						J.,	J.M.A1	^	LNOMALI	-X10,	X		VEL	DCITY			h8 -	ot/I	μg + a1	7	µg - at/l	µg = 01/1	yg - at/	l pn	č
							1				Ι,																	
			STD	0000		0090	32			531	0	0172	221	00	00		419											
	117		08S ST0	0000		0090	32	700 72		531 533	0	0170	150	00	17		419											
				0010		0094		720		533		,01,0	,,,,	00	.,		419											
			OBS STD	0020		0097	32			534	0	0169	957	00	34		420											
			OBS	0020	) -	0097	32	730	26	634						14	420	)										
Ť			STO	0030		2800	33			663	0	014	165	00	50		434											
			OBS	0030		0082		100		663	_						434											
			STO	0050		0096	33	36 360		684	0	00121	116	00	76		434											
			OBS STO	007		0120	33			584 598	0	0107	708	01	n 5		429											
			OBS	007		0120		520		59B	•	,010	70	0.1	• >		429											
			STO	0100		0090	33			712	0	0099	511	01:	30		450											
			OBS	010	) –	0090	33	700	2	712						14	450	)										
			STD	012		0073	33	-		719	0	8800	303	01	53		463											
			OBS	012		0073		800		719							463											
			STO	0150		0022	33			725	0	00082	259	OI.	74		492											
			085	0150		0022		900		725				02			492											
			STO OBS	0200		0060	34	120		744 744	U	00063	772	02	1 7		486 486											
			STO	0250		0048	34			750	0	0058	326	02	41		501											
			OBS	0250		0048		200		750		, 000	,20	02.	V A.		501											
			STD	0300		0015	34			754	0	0055	29	02	70		526											
			OBS	0300		0015		260		754							526											

CIRY	RENCE ID.	SHIP	LATITU		DNGITUDE TO		RE	STATION (GM	T)	YEAR	CRUISE	s	ATDR"	N	DEPTH TD BDTTOM	DEPTH DF	1 08		VE A TION	S T1	/EA- HER	CLOUD			NDDO	N
CODE	_	-	-	1/10	1710	10			NR.1/10		NO.		4U M BE			S"MPL	5 DIR	HG	PER	SEA	DDE	TYPE AM	1		NUMB	_
31	816	O WE	7616	5N   0	72390W	260]		9 25	131	1969		001			0440			_[		(	)3	5 8			009	94
							WAT		WIND	BARE METE	D-	IR TEA	MP. °C	VIS	ND. DBS.		CIAL									
							CDDE	Imi DI	R. OR	1		JLB	BULI		DEPTHS	OBSER	VA TIDNS	1								
							DΤ	S 12	2 525	05	5 -0	08	-01	1 9	13											
		MESSEN	R CAST	CARD		1					SPECIFIC	1		₹ Δ D	T			1		T	T			T		-
		HR 1/1	OI NO.	TYPE	DEPTH (m)	Т	°C	5 *4.	SIG	MA-I	ANOM			X 103		DCITY	D <sub>2</sub> ml/		PD 4-P 0 = 01/1	TDTA		ND2←N µg ~ at/l	ND3-N yg - oi/l	St O4-5		н С
		1111	-			+			_				_		-			-		+	$\rightarrow$				+	-H
		1	1	STD	0000	-00	180	3275	26	35	001	687	۰ ' ه	0000	144	425		- 1		l	- 1			1	1	11
		13	1	OBS	0000	-00	180	32750	26	35				_		425										
				STD	0010	-00		3276		35	001	578	8	0017		426										
				OBS	0010	-00		32760		35						426										
				STD OBS	0020 0020	-00 -00		3277 32770		36	001	569	6 1	0034		427										
				STO	0030	-00		3321		36 71	001	335	R	0049		427 440										
				085	0030	-00		33210		71	001	ارر	U	004)		440										
				STD	0050	-00		3342		89	001	170	5	0074		441										
				obs	0050	-00		33420	26	89					14	441										
				STD	0075	-00		3356		01	0010	)57	2 (	0102		441										
				OBS	0075	-00		33560		01			_			441										
				STD	0100	-00		3377		17	0000	901	8	0126		456										
				OBS STD	0100 0125	-00 -00		33770 3384		21	000	961	2	0148		456 476										
				OBS	0125	-00		33840		21	000	JO 1	_ '	J140		476										
				STD	0150	-00		3394		28	000	799	8	0169		497										
				OBS	0150	-00		33940		28			_			497										
				STD	0200	-00	24	3405	27	37	000	709	6 1	0207	14	502										
				OBS	0200	-00		34050		37						502										
				STD	0250	-00		3417		48	0000	510	3 (	0240		505										
				OBS	0250	-00		34170			000			240		505										
				STD	0300 0300	-00		3423 34230		52	0009	067	/	)269		518 518										
				OBS STD	0400	-00		34230	) 27 27		0009	5040	n 6	323		535										
				OBS	0400	-00		34310					,			535										

NDDC-3167/29 (9-46)



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